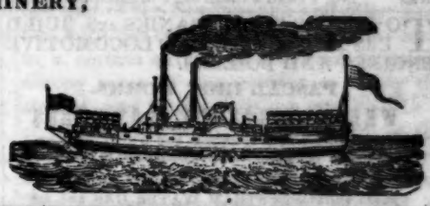
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY, AND MINES.



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THE AMERICAN RAILROAD JOURNAL is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

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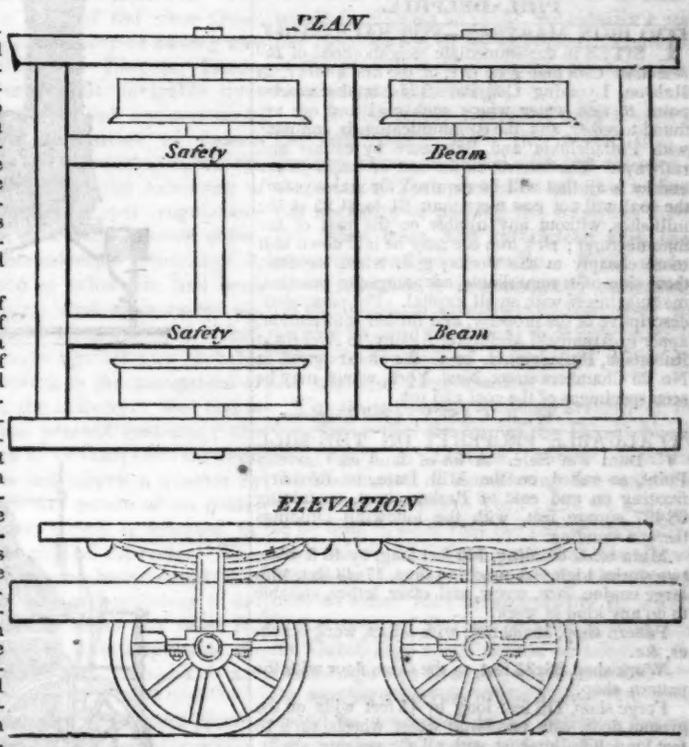
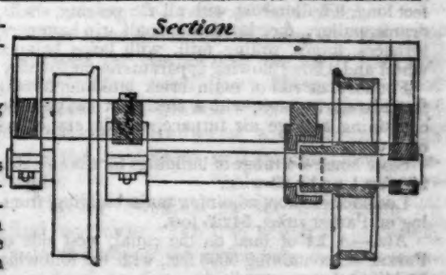
KITE'S PATENT SAFETY BEAM.

MESSRS. EDITORS.—As your Journal is devoted to the benefit of the public in general I feel desirous to communicate to you for publication the following circumstance of no inconsiderable importance, which occurred some few days since on the Philadelphia, Wilmington and Baltimore railroad.

On the passage of the evening train of cars from Philadelphia to this city, an axle of our large 8 wheeled passenger car was broken, but from the particular plan of the construction, the accident was entirely unknown to any of the passengers, or, in fact, to the conductor himself, until the train, (as was supposed from some circumstances attending the case,) had passed several miles in advance of the place where the accident occurred, whereas had the car been constructed on the common plan the same kind of accident would unavoidably have much injured it, perhaps thrown the whole train off the track, and seriously injured, if not killed many of the passengers.

Wilmington, Del., Sept. 28, 1840.





☞ The undersigned takes pleasure in attesting to the value of Mr. Joseph S. Kite's invention of the Safety Beam Axle and Hub for railroad cars. They have for some time been applied to passenger cars on this road, and experience has tested that they fully accomplish the object intended. Several instances of the fracture of axles have occurred, and in such the cars have uniformly run the whole distance with entire safety. Had not this invention been used, serious accidents must have occurred.

In short, we consider Mr. Kite's invention as completely successful in securing the safety of property and lives in railroad travelling, and should be used on all railroads in the country.

JOHN FRAZER, Agent,
GEORGE CRAIG, Superintendant,
JAMES ELLIOTT, Sup. Motive Power,
W. L. ASHMEAD, Agent.

☞ A model of the above improvement is to be seen at the New Jersey railroad and transportation office, No. 1 Hanover st., N. York. ja45

TO IRON MANUFACTURERS. THE SUBscribers, as Agents of Mr. George Crane, of Wales, having obtained a patent in the United States for his process of smelting Iron Ore with Anthracite coal, and holding an assignment of the patent obtained by the late Rev. F. W. Geissenhainer, are prepared to grant licenses for the manufacture of Iron according to Mr. Crane's principle.

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From 4 inches to ¼ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.

Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

TO IRON MASTERS.—FOR SALE.—MILL SITES in the immediate neighborhood of *Bituminous Coal* and *Iron Ore*, of the first quality, at Ralston, Lyoming Co., Pa. This is the nearest point to tide water where such coal and ore are found together, and the communication is complete with Philadelphia and Baltimore by canals and railways. The interest on the cost of water power and lot is all that will be required for many years; the coal will not cost more than $1 to $1 25 at the mill sites, without any trouble on the part of the manufacturer; rich iron ore may be laid down still more cheaply at the works; and, taken together, these sites offer remarkable advantages to practical manufacturers with small capital. For pamphlets, descriptive of the property, and further information, apply to Archibald McIntyre, Albany, to Archibald Robertson, Philadelphia, or to the undersigned, at No. 23 Chambers street, New York, where may be seen specimens of the coal and ore.

W. R. CASEY, *Civil Engineer*,

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 feet, with lathes, work benches, &c.

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containiug 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja45

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by A. & G. RALSTON
Mar. 20tf 4 South Front St., Philadelphia.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. ANDREW C. GRAY,
ja45 President of the Newcastle Manuf. Co.

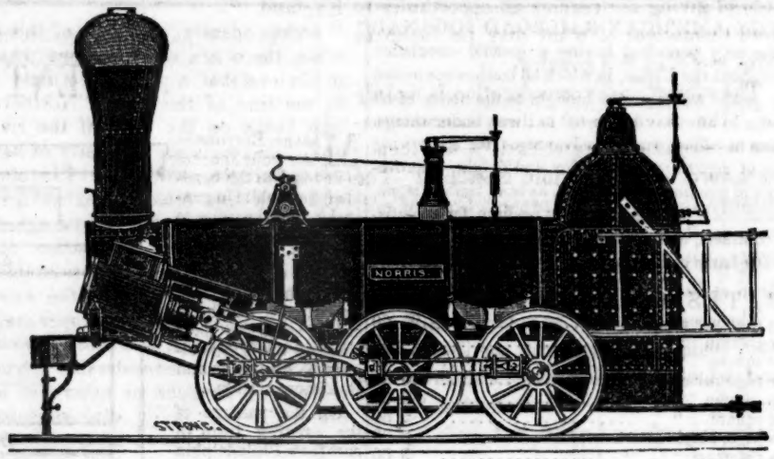
CUSHMAN'S COMPOUND IRON RAILS etc. The Subscriber having made importat improvements in the constrnction of rails, mode n guarding against accidents from insecure joints, etc. —respectfully offers to dispose of Company, State Rights, etc., under the privileges of *letters patent* to Railroad Companies, Iron Founders, and others interested in the works to which the same relate. Companies reconstructing their tracks now have an opportunity of *improving* their roads on terms very advantageous to the varied interests connected with their construction and operation; roads having in use flat bar rails are particularly interested, as such are permanently available by the plan.

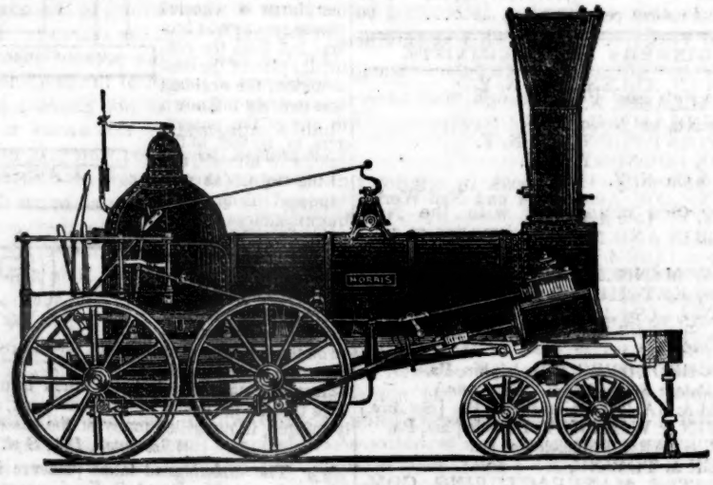
W. Mc. C. CUSHMAN, *Civil Engineer*,
Albany, N. Y.

Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applicaitons must be post paid.

NORRIS' LOCOMOTIVE WORKS

BUSH HILL, PHILADELPHIA, Pennsylvania.





MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15	inches	Diameter of	Cylinder,	× 20	inches	Stroke.
"	2,	14	"	"	"	× 24	"	"
"	3,	14½	"	"	"	× 20	"	"
"	4,	12½	"	"	"	× 20	"	"
"	5,	11½	"	"	"	× 20	"	"
"	6,	10½	"	"	"	× 18	"	"

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

RAILWAYS IN ENGLAND AND THE BOARD OF TRADE.

There is much pleasure and profit to be derived from reading the reports of the "*Railway Department of the English Board of Trade.*" The gentlemen who compose this department, or committee, appear from their reports to be men of intelligence and character, who look at the subject of railway extension with an eye solely to the general good of the people at large—not as interested parties, or *partizans*—and it does one good, in these times of selfish and local controversies, in relation to rival lines, to read their reports. We shall therefore make occasional extracts from them, for the purpose of giving our readers an opportunity to avail themselves of what may be found in them useful in this country.

The subject under consideration is mainly for "the extension of railway communication between London and York"—and thence northward, of course, into Scotland. The distance to York by the present lines of railway, is 219 miles, and as the *crow* flies 175½ miles, but by the proposed direct Northern railway, it will be 185½.

The committee oppose connecting it with *other* roads, or rather with the *North Midland*, which now has a large amount of business. The route recommended by the committee is from London to Cambridge, by the "Northern and Eastern railway," and thence to Lincoln, Bawtry, Doncaster, Selby and York; being somewhat at variance with the line projected, which passed through Huntington and Peterborough, and thence to Lincoln, or Newark and Bawtry, etc., to York.

The committee thus speak in relation to the proposed connection with the North Midland:

"We consider it improper that the traffic of any new line should open upon the York and North Midland Railway, with which so many lines are already in connection, as to render delay unavoidable, and collision not improbable. In consequence of the numerous trains of luggage and passengers using this line, nearly two hours are sometimes occupied in passing over a little more than 30 miles from York.

"We may add, that the position of the York and North Midland line as part of the existing link of communication, with which a new eastern line between London and York would compete, renders it peculiarly undesirable that any portion of this latter line should be dependent upon a small length of the former. In the case of the Northern and Eastern line, the adoption of which to Cambridge we have recommended, the most thorough identity of interest exists between it and the proposed new lines for completing the communication northwards. But the effect would be very different of placing a short link of a few miles at the York end of this great scheme, under the control of a company having distinct, and to a certain extent, conflicting interests.

"For these reasons, we conclude that the chain of communication from London to Lincoln, should be completed by a direct and independent line northwards from Lincoln to York.

"The only two schemes, as we have said, which present themselves for this purpose, are the direct Northern, and the Lincoln, Leeds and York.

"The former scheme has the advantage of having, as it is stated to us, a subscription deed executed for £4,000,000 of capital, and the requisite deposits lodged in the Bank of England.

Independently, however, of this consideration, there are other reasons which make it obvious that a preference must be given to the line of the Direct Northern. This line keeps on the west of the river Ouse, and thus avoids the necessity of having any swing-bridges, while the Lincoln, Leeds, and York line crosses that navigable river twice—once near Selby, and again close to York. Where the navigation of vessels with fixed masts is not considerable, we are not disposed to think that the existence of a swing-bridge, under proper regulations and arrangements, is a very serious objection, and if any considerable advantage in respect of distance or otherwise had been attained by crossing and re-crossing the Ouse, we should have been prepared to balance these advantages against any probable amount of interruption to the navigation or to the traffic upon the railway. But this is not the case in the present instance; the difference of length of the two lines between Selby and York is not above a quarter or half a mile, and we are aware of no public advantage whatever which is attained by keeping on the east side of the river. This being the case, there can be no doubt that the swing-bridges are in themselves a decided objection, since, under the most favourable circumstances, it is impossible altogether to avoid delay and some risk of accident.

In another respect also, the Direct Northern scheme appears to be decidedly preferable. It is the only one of the proposed schemes which complies with the recommendation of the Commissioners above quoted, *and which avoids all interference with existing lines* at York. It proposes to form an independent station for York, at a convenient spot upon the Tadcaster road, a short distance from Micklegate, and thence crosses with the main line over the York and North Midland Railway, running into the Great North of England line, about a mile beyond York. The advantages of this arrangement for all through traffic from the north are obvious, since trains may thus be run past York with no more stoppage than is required at an ordinary first-class station; while in case the whole traffic had to cross the York and North Midland line on a level, close to the station, where it is most crowded, the loss of time could not, under the most favourable circumstances, amount to less than 20 minutes or half an hour. With the prospect of a great increase of traffic in the already crowded York station, from the opening of the Scarborough and other lines, and with the collision of interest that must, to a certain extent, be expected to prevail among some of the companies using that station, and whose rails are proposed to be crossed on the level, it appears to us that such an arrangement would be in the highest degree inconvenient and even dangerous. *The inconvenience and delay of such arrangements upon great lines of through communication have been already felt; and one of the great objects proposed by the Trent Valley line now before Parliament, is to get rid of the delay incurred at Birmingham in the journey between London and Liverpool and London and Manchester.* With such instances before us, it appears to us that it would be unwise to incur voluntarily a similar interruption of an aggravated character in the great line of communication between London and Edinburgh.

It is also highly desirable, with a view to the coal traffic from the north, that a through communication with the country to the south of York should be afforded without the necessity of passing the waggons across the other lines, and interfering with their passenger and goods traffic. With such a communication it is confidently anticipated by the Durham coal-owners that they will be able to send their coal in large quantities down to Goole and Selby, and even into the north of Lincolnshire.

For these reasons we have arrived at the conclusion that the line of the Direct Northern, north of Lincoln, affords decidedly the best means of completing the main line of communication to York; and we are glad to be able to state that the parties themselves have taken this view, and that the Direct Northern Company have stated their readiness to enter into arrangements by which, in the event of Parliament considering that the Cambridge route should be adopted, the Cambridge and Lincoln, in conjunction with the northern portion of the Direct Northern, would be presented as an integral scheme for carrying this purpose into effect.

The most important of these are the lines proposed for connecting the main line and Lincolnshire with the Manchester and Sheffield, the Manchester and Leeds, and the Midland Railways, and through them with the coal fields and manufacturing districts.

Taking Sheffield as the first point, we find no fewer than five schemes proposed, with the object of extending railway communications from this town and from the Sheffield and Manchester Railway eastwards.

We now proceed to recapitulate briefly the conclusions at which we have arrived, and the leading results, with reference to a great national system of railway communi-

cation, which we have had in view in submitting for the consideration of Parliament the recommendations contained in this report.

The adoption of the Cambridge and Lincoln and northern portion of the direct northern lines, in connection with the line of the northern and eastern, which will shortly be opened to Cambridge, and with the Tottenham and Farringdon-street Extension, will afford an integral and independent trunk line to the north, which, having regard to gradients, is probably *as short, in point of time, as could possibly be constructed, with a first-rate metropolitan terminus*; passing through the principal towns on the eastern side of the kingdom between London and York, by the route, the first stage of which has been already sanctioned by Parliament, and which has been always considered as the most natural and desirable.

By this line, from the completion of the portion as far as Cambridge, and from the extreme facility of execution of the remainder, all the public advantages that can reasonably be anticipated from economy of construction will be insured. The completion of the whole undertaking within a moderate period, and whatever may be the state of the money market, or rise in the price of labour and iron, may, from this cheapness of construction, be rendered certain by the introduction of proper clauses. The existence of the undertaking in a state of independence, affording to the public whatever benefits may be justly expected to result from the existence of a second trunk line from London northwards, and from the indirect effects of competition, will be also rendered much more probable than could possibly be the case if an expensive line were sanctioned, less capable of carrying at low fares and sustaining competition. *At the same time no thing will be created that can be considered as unfair and injurious competition, or that will tend to depreciate the large amount of capital that has been invested* (hitherto unproductively) in the existing eastern counties and Midland lines.

The extreme cheapness of construction of the new lines from Cambridge to York will render it both practicable and equitable to secure by legislative provisions a lower system of fares and charges, and greater advantages than have hitherto been contemplated. Indeed, the parties themselves voluntarily offer such advantages, and, what is more material, are in a condition to carry their offers into effect.

The Direct Northern Company have stated their intention of offering to introduce clauses into their act, binding themselves to carry passengers at the following rate :—

"First class.... ... .at 2d. per mile.
Second class.....1½d. "
Third class.....1d. "

"To run at the least two third-class trains per day each way between London and York; that the carriages shall be properly seated and covered in, and the passengers completely protected from the weather, and that all the ordinary attentions and privileges as to baggage, &c., afforded to the other passengers, shall be given to the third-class passengers.

"To run, besides the through trains, short trains for the accommodation of the local traffic, at times best suited to the convenience and interests of the intermediate population.

"To carry coals at seven-eighths of 1d. per ton per mile, and fish, by first-class trains, at 4d., and by third-class trains, at 3d. per ton per mile."

And they state that they offer these advantages to the public in the most perfect confidence that they are justified in doing so, commercially speaking.

The traffic estimate of the Cambridge and Lincoln Company has been taken at an average of 1½d. per passenger per mile; 1¼d. per ton, or 1¼d. per quarter per mile on corn and flour; 1d. per head per mile on fat cattle, and one-fifth of 1d. per head per mile on sheep; with rates low in proportion on wool, coals and general merchandise, and it shows a profit of 9 per cent. on the estimated capital.

There appears, therefore, no reason to doubt that a tariff of charges somewhat similar to the above might be safely and fairly enforced, with ample provision for securing good accommodation for all classes of passengers, and also for securing the running of one or two quick trains daily, between London and York, at whatever speed was adopted upon other railways, *or was consistent with safety, which would certainly reduce the time of the journey to less than six hours.*

The advantages resulting from the establishment of such a system of low charges would not merely be confined to the railway in question between London and York, but would indirectly extend an influence over many other parts of the general railway system. A fair participation, also, in whatever further advantages might result from the increase of traffic and population, or from increased economy in working, owing to further improvements, would be secured to the public by the operation of the option of revision, which, in this case, owing to the smallness of the original outlay, would hold out an unusual prospect of becoming the means of insuring important advantages for the future.

In the mean time, however, the result would be, that first-class passengers would be enabled to travel from London to York for a charge not exceeding 30s., or 35s., in a time not exceeding six or seven hours, while passengers, to whom economy was an object, would be conveyed in comfortable covered carriages at charges proportionably less.

With regard to the other main object, that of affording a ready communication between the great food-producing districts of the east of England, and the great food-consuming markets—viz., the metropolis and the manufacturing districts, an inspection of the map will show that very complete provision is made by the lines whose sanction we have recommended.

By the last mentioned line a ready acces is afforded for such of the agricultural produce of the east as may have been collected by water conveyance to the great entrepot of Wakefield, and thence to the manufacturing districts.

It would be difficult to overrate the advantages that may be expected to result from the establishment of a system under which coals shall be carried over all this scheme of railways at rates not exceeding (except for short distances) ¾d. per ton per mile for toll and locomotive power, a rate which is already adopted on the Midland Railway, and which might, under the circumstances of the lines in question, be very properly enforced. The best Derbyshire and Yorkshire coals could thus be brought even to the metropolis at rates which would allow of their being sold at prices little, if at all, exceeding 20s. per ton, while they would be disseminated over the whole of the midland and eastern agricultural districts at prices proportionably less, according to the reduced distance.

The benefits thus conferred on these districts, in addition to those resulting from the means of cheap and expeditious intercourse for passengers, and for the transport of corn, cattle, and other agricultural produce, being afforded in every direction, and to all the principal markets of the kingdom, would, we are convinced, be of the greatest importance—and it appears to us, that by the combination of schemes which we have described, these great objects would be attained as securely, as completely, and as economically as it is possible to expect, and much more so than would be the case if any of the other combinations which now present themselves should be preferred.

In conclusion, we beg to draw attention to the passage of the Fifth Report of the Select Committee of last year, in which it is stated, in recommending that Reports should be made to Parliament by this department upon railway schemes—

"That no such Report should be held to prejudice the claims of private persons, the examination of which should be altogether reserved to the Houses of the Legislature."

In submitting to Parliament, in conformity with the recommendations of that Committee, the results at which we have arrived, with a view to the information and assistance of Parliament in forming a judgment upon the schemes in question, in so far as our Report may be available for that purpose, we are anxious that it should be distinctly understood that we have arrived at these results solely upon public grounds, and to the exclusion of all considerations how far such results might require to be modified by a due regard for private rights and interests.

Applicants for new railways in England are willing to accept charters with greatly reduced rates of fare and freight, as compared with previous charters granted, as will be seen from the two following statements,

which we copy from the Supplement to Herapath's Journal of 26th April.

The promoters of the Bolton, Wigan, and Liverpool line, have offered to secure the usual accommodation and advantages to the public at the following maximum charges:—

Passengers, 1st class, 2d. per mile.
" 2d " 1½d.
" 3d " 1d.
Coal, minerals, &c..1d. per ton per mile.
Cotton, wools, sugar, &c....2½d.
Manufactured goods.....3d.

and are also willing that a clause should be inserted in their bill whereby the power of revision vested in the Government by the Act 7 and 8 Vict. c.85, s. 1, should come into operation immediately on the profits of the railway amounting to 10 per cent., instead of at the expiration of 21 years from the passing of their act.

The Birkenhead, Manchester, and Cheshire Junction Railway Company offer to bind themselves in their act to a maximum tariff for

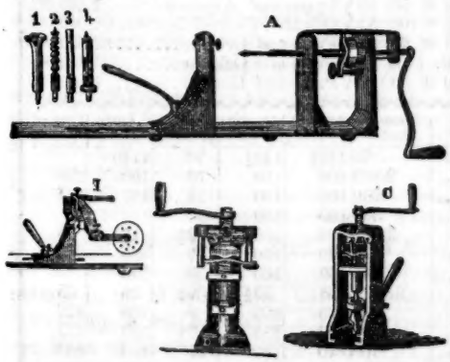
1st class passengers.....2d. per mile
2nd ditto.....1½d.
3rd ditto.....1d.

Two trains of the third class to run at the ordinary speed.

Coals and minerals to be carried 1d. per ton per mile.

[For the American Railroad Journal.]

JOHN R. GROUT'S SELF-FEEDING FRICTION DRILL FOR DRILLING IRON AND OTHER METALS.



I herewith send you the engraved plates of two forms of my friction drill, for drilling iron and other metals, of which I have made some mention to you. A is the bench form for the general purposes of the blacksmith. The frame consists of a bottom plate with a sliding poppet-head and two fixed standards. These two standards are connected at top by a bar which extends out from them, and dropping down, forms an arm parallel with them. The mandril passes through the standards and arm, one third of it at each end being round and bearing only in the arm and standard farthest from the arm, the middle portion having a screw cut on it and playing through the other standard without touching it. On the screw part there is a nut, one face of which bears against the latter standard or an intervening washer, and the other face is acted on by a friction spring. The spring is connected to the bar at top, and is acted on at its lower end by a thumb-screw, which taps into the standard next to the arm. The spring is elliptical in form, receives the mandril through it, and equals in width the diameter of the nut. The face of the nut next to the spring is undulating, or made with four high parts and four low ones, passing smoothly into each other at equal distances, the high parts, only, in revolving the nut, touching the spring. The nut inclines to revolve with the mandril, and does so revolve, if not acted on by the spring; but when the spring is brought to bear against it by the action of the thumb-screw, its motion is retarded,—the friction of each high part, in passing over the convex part of the spring, stopping it for an instant. In each of these retardations of the nut, the mandril advances through it, and presses its bit into the object to be drilled against the poppet-head, with any required degree of force. The drill is self-feeding by the use simply of the spring and nut, thus constructed and operated; it is set to any feed by simply turning the thumb-screw; it is self regulating in its feed, which preserves the bit; and it requires only the reverse motion of the mandril to withdraw the bit. In place of the bit, which the cut shows in the mandril, the mandril receives fig. 1, which is a hollow auger for tenoning spokes; fig. 2, a common auger for boring; and figures 3 and 4, chisels for morticing hubs and other stuff—to all of which purposes the machine is minutely adapted. I is the frame for holding the hub in morticing it. It attaches to the poppet-head, and has all the motions necessary for its purposes.

C is the railroad form of the drill, and is used for drilling the flat bar on the track, in place of taking it up and getting it punched. It is 8 inches in height to the top of the frame, and weighs 10 lbs. The frame is cast iron, and consists of two standards, connected by a plate at top, by a bar 2½ inches below the plate, and by a bolt 2½ inches below the bar. The right hand standard is connected with the plate by a joint; with the bar, by a pin in the end of the bar, setting into it; and with the bolt, by the latter passing through it and receiving a tightening nut on the outside of the standard. The foot of each standard is made with a jaw for receiving the iron to be bored. The mandril passes down through the centre of the plate and bar and bolt, and receives in the lower end of it a bit so formed as to cut through the iron for the body of the spike, and at the same time countersink for the head. The nut and spring and thumbscrew are formed and operate precisely as in the bench drill. To put the drill on the bar, turn off the tightening nut, swing out the right-hand standard till the bar is taken into the jaws, then draw the standards together with the tightening nut, till the bar is fast held between them. The drill is then worked as in the bench form of it. If the bar is not sufficiently up from the rail to enter the jaws, it is readily raised for that purpose. This drill is found to be a most useful little tool on flat bar roads. The hole which it makes in railroad iron, the quality of which is usually poor, is better than the punched hole; and it can be made and the bar spiked with a saving of at least four-fifths of the cost of taking the bar from the track, getting it punched, &c. It is much saving also in preserving the iron and the wood rail, it being a means in the hands of the repairer which enables him to fasten down the iron without delay whenever he finds it loose.

D is a sectional view of this drill, having the right-hand standard removed.

I sell the drill at $8, or at that rate for any number, and the right of using it for $2 per mile of road. I have the testimony of the superintendents of several roads, that its use has proved a saving to them of its cost and the cost of the right, in from four to five months.

I make the drill in several forms besides those here shown. The parts by which the feeding action is obtained are so simple and compact, that the drill may be made in any form which is adapted to the work to be done with it. Very respectfully, &c.

J. R. GROUT.

Birmingham, Oakland Co. Mich.

☞ Models of the above improvements may be seen at the office of the R. R. Journal, 23 Chambers street, where further information may be obtained, or of Mr. Paul Grout, 27 Stanton street, who will dispose of the drill and patent as agent for the inventor.

ENGLISH RAILROADS.—One of the last London papers states that the aggregate receipts, since the first of January, on the principal public railways, amount, in round numbers, to £1,210,000, while last year it only reached £1,054,000, being an increase of £156,000 or about $780,000, on the quarter.

ENGLISH RAILROAD SHARE-LIST.

NAME OF RAILWAY.	Miles opened.	Total sums, in pounds, authorized to be raised by shares.	Total sums, in pounds, authorized to be raised by loan or mortgage.	Total sums, in pounds, expended at dates of latest balance sheets.	Cost of working, in pounds for six months as stated in latest balance sheets.	Total earnings, in pounds, for six months as stated in latest balance sheets.	Dividend at last meeting. Per share. £ s. d.	Dividend at last meeting. Per cent. per annum. £ s. d.	Paid on share.	Value of share.
Arboath and Forfar	15	102,000	35,000	138,870	.....	.....	0 12 6	2 10 0	25	27
Birmingham and Gloucester	55	1,187,500	407,336	1,500,806	39,261	53,203	1 5 0	2 10 0	100	100
Brandling Junction	23	161,700	365,470	481,452	.....	.....	.....	4 10 0	50	54
Bristol and Gloucester	37½	400,000	211,000	.....	.....	.....	.....	nihil.	30	36
Chester and Birkenhead	14½	750,000	143,170	518,989	5,856	13,148	0 8 6	1 14 0	50	32
Dublin and Drogheda	31	450,000	150,000	500,869	.....	.....	.....	nihil.	55	72
Dublin and Kingston	6	200,000	152,200	359,000	.....	.....	6 0 0	6 0 0	100	166
Dundee and Arbroath	16¾	100,000	49,445	153,416	2,989	6,993	1 5 0	5 0 0	25	29
Durham and Sunderland	18¾	169,350	124,055	270,392	9,889	17,702	.....	nihil.	34	29
East County and North and East	86¼	4,443,200	1,341,155	3,931,905	47,385	118,726	1 6 6	.....	45	57
Edinburg and Glasgow	46	1,125,000	375,000	1,649,523	29,429	55,866	1 2 6	4 10 0	50	57
Glasgow, Paisley and Ayr	51	937,500	.....	1,066,951	12,446	36,736	1 2 6	4 10 0	50	60
Glasgow, Paisley and Greenock	22½	650,000	216,666	787,884	11,572	23,177	0 5 0	2 0 0	25	12
Grand Junction	104	2,478,712	.....	2,453,169	84,309	195,080	5 0 0	10 0 0	100	210
Great North of England	45	969,000	581,017	1,262,518	12,201	36,189	1 12 6	3 5 0	100	119
Great Western	221¼	4,650,000	3,679,343	7,272,539	132,235	369,904	3 10 0	7 0 0	75	138
Hartlepool	15½	438,000	155,540	719,205	.....	.....	.....	8 0 0	100	...
Leicester and Swannington	16½	140,000	.....	140,000	2,207	6,317	1 5 0	5 0 0	50	...
Liverpool and Manchester	32	1,209,000	497,750	1,739,835	57,239	117,559	5 0 0	10 0 0	100	203
Llanelly	27	200,000	44,000	221,624	.....	.....	1 0 0	2 0 0	87	...
London and Birmingham	12½	6,874,976	1,928,845	6,393,468	92,823	405,768	.....	10 0 0	100	218
London and Blackwall	3¾	804,000	266,000	1,315,640	15,978	23,870	.....	.....	16	6
London and Brighton	56	1,793,800	998,350	2,630,451	29,372	84,880	0 12 0	2 8 0	50	47
London and Croyden	8½	550,000	229,000	761,885	7,583	10,545	0 5 0	2 10 0	14	17
London and Greenwich	3¾	759,383	233,300	1,040,930	15,193	28,933	.....	nihil.	13	10
London and South Western	92¾	2,222,100	630,100	2,596,291	68,457	150,469	1 12 6	6 10 0	41	73
Manchester and Birmingham	31	2,100,000	690,586	1,923,699	15,397	58,162	1 0 6	5 0 0	40	48
Manchester and Bolton	10	778,100	197,730	773,743	8,585	21,140	2 2 0	4 10 0	93	110
Manchester and Leeds and Hull	81	2,937,500	1,943,932	3,921,593	46,653	156,761	.....	7l. & 10l.	60	88
Midland railway	178½	5,158,900	1,719,630	6,279,056	76,983	281,898	.....	.....	100	96
Newcastle and Carlisle	61	878,240	188,563	1,135,069	26,499	73,947	4 0 0	4 0 0	100	105
Newcastle and Darlington	23	500,000	.....	405,728	.....	.....	.....	nihil.	21	49
Newcastle and North Shields	7	150,000	153,876	309,629	8,943	18,466	.....	2 0 0	50	37
North Union	39	739,201	308,306	1,015,447	9,071	37,794	2 10 0	6 16 8	100	104
Paris and Orleans	82	1,600,000	400,000	1,978,415	.....	.....	0 16 0	8 0 0	20	39
Paris and Rouen	84	1,440,000	.....	.....	31,247	91,171	.....	8 0 0	20	38
Preston and Wyre	19	830,000	179,852	355,161	4,191	7,066	.....	nihil.	50	18
Sheffield and Manchester	19	1,150,000	311.759	951,455	11,895	14,876	.....	nihil.	82	93
South Eastern	88	2,996,000	1,530,277	3,464,172	40,993	81,482	0 10 6	2 2 0	50	39
Taff Vale	30	465,000	154,785	590,006	8,509	18,414	1 0 0	6 5 0	100	55
Ulster	25	519,150	20,000	348,626	5,401	13,856	0 15 0	5 1 8	29	37
Yarmouth and Norwich	20½	187,500	62,500	230,250	.....	.....	.....	nihil.	16	25
York and N. Mid. and Leeds and Selby	28	1,062,500	167,500	676,644	27,132	55,752	2 10 0	10 0 0	50	100

NEW AND PROPOSED RAILWAYS.	Share Capital.
Aberdeen	1,600,000
Barnsley Junction	200,000
Belfast and Ballymena	385,000
Blackburn and Accrington	400,000
Birk. and Ches. Junction	1,000,000
Bolt., Wigan and Liverpool	800,000
Caledonian	1,800,000
Cambridge and Lincoln	1,250,000
Chatham and Portsmouth	5,000,000
Chester and Wrexham	120,000
Churnet valley	1,800,000
Direct Northern to York	4,000,000
Dublin and Belfast	950,000
Dundee and Perth	250,000
Edinburg and Northern	800,000
Ely and Bedford	270,000
Glosgow, Dum. & Carlisle	1,300,000
Gt. South and West Ext	1,200,000
Gt. Grimsby and Sheffield	600,000
Harwich and E. coun. Jun.	160,000
Huddersfield & M. rl. & cl.	600,000
Kendal and Windermere	125,000
Leeds and Dewsbury	400,000
Leeds and Thirsk	800,000
Liv. Ormskirk and Preston	600,000
London and Portsmouth	1,750,000
London and York	5,000,000
Londonderry & Enniskillen	500,000
Lynn and Ely	200,000
Manchester, Bury and Ross	300,000
Manchester and Buxton	250,000
Mullingar and Athlone	.....
Newcastle and Berwick	700,000
Richmond & W. End Junc.	.....
Scottish Central	700,000
Sheffield and Lincolnshire	650,000
Shrewsbury and Gd. Junc.	400,000
Shrew. Wolv. Dudly & B.	900,000
Trent Valley	900,000
West London Extension	64,000
West Yorkshire	1,000,000
Whitehaven and Maryport	100,000
FRENCH RAILWAYS.	
Boulogne and Amiens	1,500,000
Central of France	1,280,000
Lyons and Avignon	2,400,000
Orleans, Tours & Bordeaux	2,000,000
Paris and Lyons	2,500,000
Paris and Orleans	1,600,000
Paris and Rouen	1,400,000

Steam and Miscellaneous.

NAME OF COMPANY.	Num. of shares.	Am't. of share.	Amount paid.	Div. p c. per ann.	Last price.	Present price.
Anglo Mexican Mint	10,000	10	10	.....	15¼	15¼
Anti Dry Rot	10,000	.....	18¾	.....	2	.....
Australian Trust Company	5,700	100	35	.....	34¾	.....
General hteam Navigation	20,000	15	14	10	27½	27
Gt Western Steam Pa	.....	.....	100	.....	25	.....
Metropolitan Wood Pav	15,000	10	6	5	6¼	.....
Patent Elastic Pav	10,000	1	1	5	1¼	.....
Peninsular and Oriental	11,493	50	50	7	64¼	65
Ditto	3,200	50	40	7	.....	.....
Polytechnic Institution	.....	.....	.....	6	.....	.....
Reversionary Int. Soc	5,3 ∞	100	100	4½	104	104
R. Mail Steam Packet	15,000	100	60	.....	36½	37
South Western Steam	4,000	25	5	.....	.....	.....
Ship Owners' Towing	3,000	10	7½	10	15	.....
Thames Tunnel	4,000	50	50	.....	.....	.....
University College	1,500	100	100	.....	.....	.....
Canals.						
Ashby de la Zouch	1,432	113	av.	4	70	70
Barnsley	720	100	100	14	180	180
Birmingham, 1-16 share	3,000	118¾	79	10	150	160
Do. and LiverpoolJunction	4,000	160	100	.....	13½	13¼
Coventry	500	100	100	20	365	365
Cromford	460	do.	do.	24	250	250
Derby	600	do.	do.	9	105	105
Erewash	231	do.	do.	32	440	440
Forth and Clyde	1,297	400¼	40¼	4	440	440
Grand Junction	11,600	100	100	7	162	161¼
Grand Surrey	1,500	do.	do.	.....	20	.....
Gloucester and Rerkley	5,000	do.	do.	.....	8	8
Grantham	749	150	150	8	185	185
Lancaster	11,699	47¼	47¼	3	40	40
Leeds and Liverpool	2,897	100	100	34	640	640
Leicester	545	41	140	9	139	139

NAME OF COMPANY.	Num. of shares.	Am't. of share	Amount paid.	Div. p.c. per ann.	Last price.	Present price.
Loughborough	70	142¼	142¼	70	1140	
Monmouthseire	2,409	100	100	10	160	160
Melton Mowbray	250	100	100	10	117	117
Mersey and Irwell	500	100	100	10		
Macclesfield	3,000	100	100	2½	15	15
Neath	247	100	100	17	365	365
Oxford	1,786	100	100	30	505	
Regents or Loncon	21,418	33¼	33¼	2½	25	25
Shropshire	500	125	125	6	120	120
Somerset coal	800	150	150	7½	123	123
Stafford and Worcester	700	140	140	25	480	480
Shrewsbury	500	125	125	12	230	230
Stourbridge	300	145	145	14	360	360
Stroudwater	200	150	150	19		
Swansea	533	100	100	15	240	240
Severn & Why & Rail Av.	3,762	26½	26½	5½	30	30
Trent and Mersey	2,600	50	50	65	495	
Thames and Medway	8,149	19½	19½	.....	10	10
Warwick and Birmingham	,000	100	100	10½	167	
Warwick and Napton	980	100	100	8½	122	
Water Works.						
Birmingham	4,800	25	25	3½	28	28
East London	4,433	100	100	8	223	225
Grand Junction	5,500	av.	41 2-3	7½	88	90
New River L. B. Ann	1,500			2½		
Manchester and Salford	6,486	av.	30	8⅝	57	57
Vauxhall, lt. S. London	1,000		100	5	55	55
West Middlesex	8,294	av.	63½	6½	126	127
Docks.						
Commercial Dock	1,065	100	100	3	80	
East and West India		sto.		5½	137	
London	3,238,310	sto.		4½	114¼	115
St. Katharine	1,352,752	sto.		5	116	171
Southampton	7,000	50	50			

AMERICAN STATE WORKS AND CANALS, ETC.

		STATE WORKS.	Length in miles.	Cost.	1843. Income.	1843. Expend.	1844. Income.	1844. Expend.
N. Y.	1	Black river canal	35	1,524,967	.....	.....	.....	.....
"	2	Cayuga and Seneca	21	237,000	16,557	10,953	24,618	14,443
"	3	Champlain canal	64	1,251,664	102,308	.....	116,739	.....
"	4	Chemung	23	684,600	8,140	14,486	14,385	12,740
"	5	Chenango	97	2,420,000	16,195	15,967	22,179	15,960
"	6	Crooked lake	8	156,777	461	3,674	1,498	3,951
"	7	Erie—enlargement of	363	12,648,852	1,880,316	.....	.....	.....
"	8	Genessee valley	120	3,739,000	.....	.....	.....	.....
"	9	52 miles opened, cost $1,500,000	.....	.....	12,292	13,819	19,641	15,557
"	10	Oneida lake	6	50,000	225	2,239	621	1,636
"	11	Oswego	38	565,437	29,147	22,742	56,165	28,599
Pa.	12	Beaver division canal	25	.....	.....	.....	7,381	5,386
"	13	Delaware canal	60	.....	.....	.....	109,278	22,870
"	14	French creek	45	.....	.....	.....	.....	.....
"	15	Seneca river towing path	.....	69,276	.....	.....	381	.....
"	16	Columbia railroad	82	.....	.....	.....	443,336	205,067
"	17	Eastern division	36	.....	.....	.....	179,781	138,915
"	18	Juniata canal	93					
"	19	Portage railroad	130	.....	.....	.....	351,102	248,943
"	20	Western division canal	105					
"	21	North branch Susquehannah canal	73					
"	22	West " " "	72	.....	.....	.....	101,949	57,633
Ohio	23	Hocking canal	56	975,130	4,757	.....	5,286	4,139
"	24	Miami canal	85	1,660,742	68,640	38,826	77,844	22,341
"	25	Miami extension	105	2,856,636	8,291	.....	12,723	14,741
"	26	Miami northern division	35	322,000	.....	.....	unfin'd.	.....
"	27	Muskingum	91	1,627,318	23,167	.....	29,385	15,027
"	28	Ohio	334	4,600,000	322,754	123,398	343,711	113,210
"	29	Wabash	91	3,028,340	35,922	6,400	48,589	12,817
"	30	Walhonding	25	607,269	838	39,005	1,977	1,238
"	31	Western road	31	255,015	7,254	1,782	8,747	2,929
Ind.	32	Sundry works	.....	11,000,000	.....	.....	.....	.....
"	33	Maume canal	.....	.....	.....	.....	.....	.....
Ill.	34	Sundry works	.....	10,000,000	.....	.....	.....	.....
Mich	35	Central railroad	110	1,842,308	149,987	75,960	211,170	89,420
"	36	Southern railroad	68	936,295	24,064	7,907	60,341	70,000

The State Canals are all 4 feet deep, and the locks are 13 to 17 feet wide, and 80 to 90 feet in length.

The six millions paid to the canal fund from auction and salt duties are not included in the estimate of cost. The Genesee valley and the Black river canals require large sums for their completion, the interest of which *additional* sum is much greater than the estimated gross income of these canals when finished. The sums required to complete these two canals are $2,000,000 and $600,000, making their total cost when finished $5,553,000 and $2,409,000; an expenditure incurred on estimated incomes (admitted to be liberal,) of $39,000 and $14,000 respectively.

The total receipts from the works of Pennsylvania for 1843 were $1,019,401; for 1844 $1,164,326, and the cost about 30 millions.

The receipts for 1844 were as follows:

Canal tolls,	578,404
Railroad tolls,	252,855
Motive power,	319,590
Trucks,	13,477

of which $585,922 is from 118 miles of railroad, and $578,404 from 550 miles of canal.

The canals of Ohio are supported by a property tax of 5½ mills on the dollar. There are 853 miles of canal in the State, which yielded in 1843 $471,623, and in 1844 $515,393, the cost, 1st Jan. '43 being $15,577,233. The increase of '44 over '43 is only $43,770, though the year '44 has exhibited a greater increase throughout the country than ever before known.

These 21 millions on sundry works yield no income whatever.

The central railroad yields above 6 per cent., and is the only State work—the Erie canal excepted—which is able to stand alone.

	CANALS.	Length in miles.	Cost.	1843. Income. Gross.	1843. Income. Nett.	Div. per cent.	1844. Income. Gross.	1844. Income. Nett.	Div. per cent.	Value of stock.
	Blackstone	.....	.....	.....	.....	....	.....	.....	....	.....
	Bald Eagle Navigation	25	400,000	.....	.....	....	.....	.....	....	.....
	Beaver and Sandy, (part)	.....	1,000,000	.....	.....	....	.....	.....	....	.....
	Charleston, (S. C.)	.....	.....	.....	.....	....	.....	.....	....	.....
	Chesapeake and Ohio	184	12,370,470	47,637	.....	....	.....	.....	....	.....
	Conestota	12	300,000	.....	.....	....	.....	.....	....	.....
	Delaware and Chesapeake	13	.....	.....	.....	....	.....	.....	....	26
	Schuylkill	108	3,500,000	279,795	102,221	....	190,693	120,624	....	31
	Farmington	.....	.....	.....	.....	....	.....	.....	....	.....
	James river and Kenhawa	.....	.....	.....	.....	....	.....	.....	....	.....
	Middlesex	.....	.....	.....	.....	....	.....	.....	....	.....
	Port Deposit	10	200,000	.....	.....	....	.....	.....	....	.....
	Delaware and Raritan	43	2,900,000	99,623	53,327	....	131,491	84,455	....	.....
	Southwark	.....	300,000	.....	.....	....	.....	.....	....	.....
	Tide Water	45	2,900,000	.....	.....	....	.....	.....	....	.....
	Union	80	2,000,000	.....	.....	....	.....	.....	....	.....
	Morris	101	1,000,000	.....	.....	....	.....	.....	....	28
	Dismal Swamp	.....	.....	.....	.....	....	.....	.....	....	.....

REMARKS.

We may, perhaps, at some future time be enabled to give the particulars of all these canals.

The Chesapeake and Ohio canal is not yet completed to the coal mines, hence its trifling income.

The enlargement of the Schuylkill canal has been commenced.

The Morris canal was lately sold for one million, about one-fourth of its cost. It is said in the papers that it is to be enlarged. We have seen no report, nor heard of the appointment of any engineer.

CANADIAN CANALS.	Length in miles.	No. of locks.	Lockage in feet.	Size of locks. Length of chamber.	Size of locks. Width.	Width of canal. Depth on mitre sill.	Width of canal. Bottom.	Width of canal. Surface.	Estimate.	Expended to Sept. 1843.	Income. 1843.	Income. 1844.
The Welland canal	.....	.....	.....	feet.	feet.	feet.	feet.	feet.	3,948,572	2,485,572	64,658	
Main trunk from Port Colborne to Port Dalhousie	28	31	328	150	26 1-2	8 1-2	45	81	.....	.....		
Junction branch to Dunville (not added)	21	1	6	150	26 1-2	8 1-2	35	71	.....	.....		
Broad creek branch to Port Maitland (below.)	1 1-2	1	6	200	45	9	45	85	.....	.....		
The St. Lawrence canal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Galops and Port Cardinal	2	2	7	200	45	9	50	90	.....	.....		
Rapid Plat	4	2	11 1-2	200	45	9	50	90	672,498	973		
Farren's point	3-4	1	3 1-2	200	45	9	50	90	.....	.....		
Cornwall, passing the Long Sault rapids	11 1-2	7	48	200	55	9	100	150	865,372	1,665,663		
Beauharnois, do. Coteau, Cedars and Cascades road	11 1-4	9	82 1-2	200	45	9	80	120	1,190,087	275,426		
Lachine, do. Lachine rapids	8 1-2	5	44 1-2	200	45	9	80	120	old canal.	400,000	29,288	
Elargement of do.	.....	.....	.....	.....	.....	.....	.....	.....	1,001,333	64,439		
Total from lake Erie to the sea	12	57	525									
Chambly	66	9	74	120	24	6	36	60	200,000	440,000	1,409	

	COAL COMPANIES.	Length in miles R. rd.	Length in miles Canals.	Cost.	1843. Income. Gross.	1843. Income. Nett.	Div. per cent.	1844. Income. Gross.	1844. Income. Nett.	Div. per cent.	Value of stock.	REMARKS.
	Delaware and Hudson	16	108	2,800,000	930,203	196,702	10	.....	.....	....	130	
	Lehigh	20	72	6,000,000	.....	.....	....	.....	.....	....	31	

AMERICAN RAILROADS.

		RAILROADS.	Length in miles.	Cost.	Loans and debts.	Number of shares.	Paid on share	1843. Income. Gross.	1843. Income. Nett.	Div. per cent.	1844. Income. Gross.	1844. Income. Nett.	Div. per cent.	SALES. Previous prices	Week ending June 18th. Shares.	Price
Me.	1	Portland, Saco and Portsmouth	50	1,200,000				89,997	47,166	7	131,404	62,172	6	102	58	103
N. H.	2	Concord	35	750,000									12	65¼	5	65
Mass.	3	Boston and Maine	56	1,485,461				178,745	68,499	6	233,101	86,401	6¼	117	..	....
"	4	Boston and Maine extension	17 1-4	455,703	unfin.											
"	5	Boston and Lowell	26	1,863,746				277,315	144,000	8	316,909	147,615	8	121¼	..	....
"	6	Boston and Providence	41	1,886,135	none.	18,600	100	233,388	110,823	6	282,701	156,109	6	113	20	113
"	7	Boston and Worcester	44	2,914,078				40,141	162,000	6	428,437	195,163	7½	119½	5	119½
"	8	Berkshire	21	250,000	not stated				17,500	7	17,737					
"	9	Charlestown branch		280,260						13	34,654	13,971	5½	75½	..	....
"	10	Eastern	54	2,388,631				279,563	140,595	6	337,238	227,920	8	112½	20	112½
"	11	Fitchburg	50	1,150,000	just opn'd						42,759	26,835		122¼	18	123¼
"	12	Nashua and Lowell	14 1-2	380,000				84,079		8	94,588	34,944	10	124	..	....
"	13	New Bedford and Taunton	20	430,962				50,671	24,000	6	64,998	24,000	6			
"	14	Northampton and Springfield		172,883	unfin.											
"	15	Norwich and Worcester	59	2,170,366	900,000	16,535	100	162,336	24,871		230,674	99,464	3	73	7,290	72¼
"	16	Old Colony		87,820	unfin.									108½	10	106¾
"	17	Stoughton branch	4	63,075	unfin.											
"	18	Taunton branch	11	250,000					20,000	8	96,687	20,000	8	118		
"	19	Vermont and Massachusetts														
"	20	West Stockbridge	3	41,516	200		100						4			
"	21	Western, (117 miles in Mass.)	156	7,686,202	4,686,202	30,000		573,882	284,432		753,753	439,679	3	104½	2	103½
"	22	Worcester branch to Milbury		8,431	506											
"	23	Housatonic, (10 months,)	74	1,244,123							150,000			27½	315	29⅞
Con	24	Hartford and New Haven	38	1,100,000	100,000	10,000	100						6	95	..	
"	25	Hartford and Springfield	25 1-2	600,000	400,000	2,000	100									
"	26	Stonington, (year ending 1st Sept.,)	48	2,600,000	650,000	13,000	100	113,889			154,724	79,845		32	4,060	30⅛
N. Y.	27	Attica and Buffalo	31	336,211				45,896	7,522		73,248	48,033	0			
"	28	Auburn and Rochester	78	1,796,342	200,000	14,000	100	189,693	112,000		237,667	152,007	6	108	..	
"	29	Auburn and Syracuse	26	766,657			133⅓	86,291	27,334		96,738	52,544	6	116		
"	30	Buffalo and Niagara	22	200,000		1,500								100		
"	31	Erie, (446 miles,)		5,000,000										30½	830	29⅛
"	32	Erie, opened	53						48,000		126,020	59,075				
"	33	Harlem	26	1,206,231							140,685	62,399		70½	960	67½
"	34	Hudson and Berkshire	31	575,613			50				35,029	1,789	0	14	..	
"	35	Long Island	96	1,610,221	392,340	29,846					153,456	58,996	0	72	3,234	71½
"	36	Mohawk and Hudson	17	1,317,893	400,000	10,000	100	69,948	58,780		79,804	45,763	0	59	680	57½
"	37	Saratoga and Schenectady	22	303,658				42,242	3,000	1	34,666	8,455	0			
"	38	Schenectady and Troy	20 1-2	640,800				28,043			32,646	6,365	0			
"	39	Syracuse and Utica	53	1,115,897	none.	16,000	62½	163,701	72,000		192,061	120,992	8	135	50	115½
"	40	Tonnawanda	43	727,332				76,227			114,177	75,865	5			
"	41	Troy and Greenbush	6	180,000												
"	42	Troy and Saratoga	25	475,801				44,325	21,000		38,502	9,971	2½			
"	43	Utica and Schenectady	78	2,168,165	none.	20,000	100	277,164	180,000	9	331,932	199'094	8	129	242	131
N. J.	44	Camden and Amboy	61	3,200,000				682,832	383,880		784,191	404,956		110	..	
"	45	Elizabethtown and Somerville	26													
"	46	New Jersey	34	500,000										94	..	
"	47	Paterson	16	2,000,000									6	87		
Pa.	48	Beaver Meadow	26	500,000												
"	49	Cumberland Valley	46	1,000,000												
"	50	Harrisburg and Lancaster	36	1,250,000										30		
"	51	Hazleton branch	10	860,000												
"	52	Little Schuylkill	29	120,000												
"	53	Blossburg and Corning	40	900,000												
"	54	Mauch Chunk	9	600,000												
"	55	Minehill and Schuylkill Haven	18	100,000						12				77		
"	56	Norristown	20	315,000										61		
"	57	Philadelphia and Trenton	30	800,000										104		
"	58	Pottsville and Danville	29 1-2	400,000												
"	59	Reading	94	1,500,000	7,447,570	40,200	50				597,613	343,511		51½	4,618	54
"	60	Schuylkill valley	10	9,457,570												
"	61	Williamsport and Elmira	25	1,000,000				20,000								
"	62	Philadelphia and Baltimore	93	400,000				43,043	200,000			210,000		17⅞	6,940	17½
Del.	63	Frenchtown	16	4,400,000												
Md.	64	Baltimore and Ohio, (1st Oct.)	188	600,000				575,235	279,402		358,620	346,946		50		
"	65	Baltimore and Susquehanna	58	7,623,600										2¾	..	
"	66	Baltimore and Washington	38	3,000,000				177,227	71,691		212,129	104,529		84		
Va.	67	Greensville and Roanoke	17 1-2	1,800,000												
"	68	Petersburg and Roanoke	60	950,000							122,871	72,898	3			
"	69	Portsmouth and Roanoke	78 1-2	969,880												
"	70	Richmond, Fredericksb'g and Potomac	76	1,454,171							185,243	85,688	6			
"	71	Richmond and Petersburg	22 1-2	800,000												
"	72	Winchester and Potomac	32	700,000												
N. C.	73	Raleigh and Gaston	84 1-2	500,000												
"	74	Wilmington and Raleigh	161	1,360,000												
S. C.	75	South Carolina	136	1,800,000		34,410	75				532,871	140,196	5			
"	76	Columbia	66	5,671,452				201,464	77,456		328,425	180,704				
Ga.	77	Central	190					227,532	93,190							
"	78	Georgia	147 1-2	2,581,723				248,026	158,207		248,096	147,523				
"	79	Montgomery and West Point	89	2,650,000	170,000		100				35,000	15,000				
Ky.	80	Lexington and Ohio	40	500,000												
Ohio	81	Little Miami	40	450,000												
"	82	Mad river	40	400,000												
Ind.	83	Madison and Indianapolis	56	152,000												
Can.	84	Champlain and St. Lawrence	15	212,000					12,000		58,000	24,000		110		

Correspondents will oblige us by sending in their communications by Monday morning at latest.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED BY D. K. MINOR, 23 Chambers street, N.Y

Thursday, June 19, 1845.

FOREIGN RAILWAY PERIODICALS.

We avail ourselves of the earliest opportunity to acknowledge the receipt of several numbers of the London *Railway Record*,—a valuable work, and an efficient laborer in the cause—in exchange for the Journal. We are the more desirous to acknowledge the favor, as it is not common for English papers and periodicals, we believe, to send in exchange to those of similar character on this side of the water, from the fact, perhaps, that they always pay a *duty* on *each sheet* sent out by them, equal to 1d. sterling, or more than some of our papers are sold for. We shall be gratified to exhibit the numbers to engineers and others who desire to read them; and we will cheerfully order them for such as would have them regularly as published, and forwarded by the steamers or packets.

In our efforts to obtain the French railway paper, the *Journal des Chemins de Fer*, we have been less fortunate, even though requested by its editor to send ours, and offering to send his in exchange. We wrote to him in reply, accepting his polite offer, and have sent ours, every number, since 1st of March last. Yet we have neither received his paper nor any acknowledgment of our letter; but it *will* come yet, we are sure. There must be some mistake, not design, in the delay: therefore we shall contiuue to send ours.

READING RAILROAD

The following interesting view of the increase of the coal trade over this important railway must gratify every friend of the railway system, particularly in this State, where this class of intercommunication, as compared with canals, has been abused in legislative reports in no measured terms. Even the capacity of a railway to carry bulky freight has been doubted. It may sound strange, at this day, to state that there have been men in this State, who should have known better, and some occupying the situation of directors, who have gravely contended that "railways were only fit to carry passengers,—they could not carry heavy or bulky freight." But how is the fact? It is notorious that the first railway established in England, was to carry bulky freight—coal of little comparative value. The stock of this road, (the Stockton and Darlington,) is now the most profitable in Great Britain, and divides 15 per cent. annually. In this country the case is much stronger. The first railway we constructed was to transport large masses of granite at Quincy, and is very profitable. There was also, we believe, a short road in this State, in Orange or Ulster county, to transport iron ore. Col. Stevens, in 1812, proposed to Gouv. Morris, Gen. Schuyler and Gov. Clinton, a railway from the Hudson to lake Erie, in preference to a canal, to carry freight, and gave substantial reasons for his opinions, and made a near estimate of its cost. He was looked upon as little better than crack-brained. The Boston and Worcester, Lowell, Providence, and New Haven and Springfield railroads superseding as many canals in their day, tells the story of the onward march of this better improvement of intercommunication to carry freight as well as passengers. It has remained however for the Reading railway to demonstrate the superiority of a railway over one of the best canal in this country, which formerly divided above 20 per cent. For three years, we believe, it has intermitted its dividend, and cannot draw coal from the railroad, although it takes off all toll, in its competition with the railway, and guarantees freight at 65 cents per ton, 108 miles. J. E. B.

"The monthly report of the Reading Railroad Company for May, 1843, '44 and '45, presents the annexed statement of the receipts and business of the road.

PHILADELPHIA AND READING RAILROAD.

	May, 1843.	May, 1844.	May, 1845.
Receipts . .	$31,447 54	47,763 34	79,822 82
Coal transported, tons . .	15,205	35,684	64,698

The business for May, 1845, has been considerably more than the maximum estimate. Up to June 1st, the coal tonnage is over the estimate—800,000 tons for the year—rising nine thousand tons. In connection with this very favorable report and the immense improvement these increased receipts must produce in the affairs of the railroad company, we give a report of the business on the Schuylkill canal, for one week in each of the past three years.

BUSINESS ON THE SCHUYLKILL CANAL.

Week ending June 10, '43.	June 8, '44.	June 7, '45.
Coal transported, tons . .	18,095	11,869	5,796

For the same week the coal transportation of the Reading Railroad was as follows:—

	1843.	1844.	1845.
Coal transported, tons . .	2,388	8,796	18,871

It will be seen that these two works have changed places in the coal carrying trade of Eastern Pennsylvania. What the Schuylkill canal was, the Reading railroad will be, and judging from these returns, the Schuylkill canal will soon be what the Reading road was."

THE COAL TRADE.—SCHUYLKILL VALLEY.

The shipments this week amount to 25,940·01 tons; 20,191·07 by railroad, and 5,748·14 by canal, showing an increase by the former of 1,319·19, and by the latter 150·06 tons.

BY RAILROAD.

From Pottsville and Port Carbon—total.	94,879·10
From Schuylkill Haven—total.....	140,227·11
From Port Clinton—total.....	2,275·06
Total by railroad.....	237,382·07

BY CANAL.

From Pottsville and Port Carbon—total...	43,516·19
From Schuylkill Haven—total tons.....	9,818·06
From Port Clinton.....	14,742 13
Total by canal.....	68,077·18
Total by railroad and canal.....	305,450·05

LEHIGH COAL TRADE.

Total shipments from Mauch Chunk. Lehigh coal and navigation co.		
Summit mines, - - -	49300	
Room run do., - - -	14889	64189
Beaver Meadow railroad and coal co.,		21088
From Penn Haven—Hazleton coal co.,		17835
From Rock Port—Buck Mountain coal co.,		5606
		108718

WYOMING COAL TRADE—total.....	22,310
PINE GROVE COAL TRADE.—total.....	18,748
MINEHILL AND SCHUYLKILL HAVEN RAILROAD—total tons.....	149,514·17
MOUNT CARBON RAILROAD—total tons..	90,699

GROUT'S FRICTION-DRILL.—We give in this number a description of an exceedingly useful and convenient instrument for railroad companies who have the flat bar rail in use—which may require *additional holes* to be made in it. Mr. John R Grout, who has been for many years engaged as engineer on some of our western railroads, has made a Drill which can be carried in one hand anywhere, and by raising the rail half an inch, and turning a thumb-screw, it is made fast to the rail, when, with one hand upon a crank, a hole may be drilled through the rail in half the time required by the ordinary mode of doing such jobs.—A model may be seen at this office.

HARTFORD AND NEW HAVEN RAILROAD.—The receipts on this road (exclusive of mails) for May, 1845, were $16,870 34
" " 1844, " 8,456 51
Receipts for the first six months since the completion of the extension road to Springfield, ending June 9th, 1845 . 100,291 80
Receipts for the corresponding months in 1844 . . . . . 48,060 66
Showing an increase of more than 100 per cent.—*Hartford Courant.*

The receipts on the Norwich and Worcester road for the first six days in June, show a gain of over six hundred dollars in the same six days of last year, although the fare now is about half what it then was. Very good evidence in favor of *low fares.*

At a meeting of the shareholders of the Norwich and Worcester Railroad Company, held in Norwich on the 2d instant, the following were chosen directors, viz:—John C. Holland, William P. Greene, and John A. Rockwell of Norwich; Alexander De Witt of Oxford; William Ward of Boston; Jacob Little, Alfred Brooks, Elihu Townsend, John Rankin, Samuel R. Brooks and David Groesback of New York; and A. W. H. Clapp of Portland. At a subsequent meeting of the Board, John C. Holland was chosen President of the company.

NORTHAMPTON RAILROAD.—The annnal meeting of the stockholders of the Northampton and Springfield railroad was held at Boston, on Wednesday last. James K. Mills, E. H. Robbins, and Samuel Henshaw of Boston, Philip Ripley of Hartford, John Chase of Cabotville, Eliphalet Williams and Erastus Hopkins of Northampton, were unanimously re-elected directors.

We learn that the business of the road to Cabotville has fully answered all reasonable expectations. About 22,000 passengers were carried over the road in the first three months; and the net income of the road, after deducting the expenses of running, including all the expenses for repairs, &c. which, of course, must have been large, as they always are on a new road—was a little over *nine per cent.* on the cost of the road. These three months cannot, certainly, be regarded as more than a fair average of the business of the year And it should be borne in mind, in estimating the net income of this road, that it is much more expensive, *per mile*, to run so short a stretch of road, than it is a road of fifteen or twenty miles in length.

It is hoped that the road will be completed to Northampton by "Thanksgiving-time." The grading and bridging is going on rapidly. The completion of the road, however, will depend upon the success of the directors in obtaining iron.—*Hampshire Gaz.*

Providence Railroad.—The report of its financial condition is flattering, exhibiting a net income of $177,590 for the year past, or nearly ten per cent. on the capital. In the last six months there has been an increase over same period of 1844, of $16,860 in receipts, and $8,898 in expenses, so that the net increase is $7,962.

English Railroad Receipts.—By the comparative weekly statement of twenty-four English railways, which we find in the New-York Herald,—being from home, and not having access to our own English papers,—we find but one, (the Glasgow, Paisley and Ayr,) which does not show a very fair increase; and some of them show a large increase, amounting to from £2500 to £3000 for the week.

The Herald very justly remarks, that

"The weekly returns of the railroads of Europe afford the best evidence of the productiveness of these works. The receipts of nearly every company in operation are very large, but the weekly increase is sufficient to create in the minds of those interested the most favorable anticipations for the future.

"The principal lines in Great Britain regularly declare the following dividends:

The Grand Junction Railroad 10 per cent. per annum.

The Great North of England, 6 per cent. per annum.

The Great Western, 8 per cent. per annum.

The Liverpool and Manchester, 9 per cent. per annum.

The London and Birmingham, 10 per cent. per annum.

The Midland, 6 per cent. per annum.

The York and North Midland, 10 per cent. per annum.

The Manchester and Birmingham, 5 per cent. per annum.

"These roads have been constructed at an expense far beyond any thing of the kind in this country, and notwithstanding the enormous running expenses, the dividends of some of them are very large.

"Very few of the railroads of the United States pay dividends equal to these, notwithstanding the great difference in the cost and current expenses in our favour, but in time, as our country improves, as population and business increases, as our resources become developed, the dividends of our works must steadily increase, until they become as large as those of similar works in any part of the world."

It is singular that, with such evidence constantly repeated before our eyes, we can be restrained from an immediate completion of the two great roads north and west from New-York. We see capitalists competing with each other for the State loan, at 6 per cent., reimbursable in seven or eight years, while they hesitate to take stock in a work which, when it shall have been completed two years, will not only pay 6 per cent. interest, but also, at the same time, reduce the cost of many of the necessaries of life, and greatly enhance the value of real estate in and around the city. "It is truly astonishing," as the Editor of the Herald says, "that we have diverging from this city two railroads in an unfinished state, which might be made the most profitable lines in the Union. We refer to the Harlem and Erie railroads. The benefits this city would derive from a completion of these works are immense, and have been repeatedly and particularly represented, but so far without much effect." We hope, however, that the thousands, aye, the *tens* of thousands, will come forward *now*, and give these works a lift. One united effort only is requisite to put them in train. Let every man who has an interest at stake, come forward and take stock,—one or more shares, as he may be able—but *one* share at least,—and then they will be completed, when all will wonder how they could have been so long delayed.

FOREIGN CORRESPONDENCE OF THE RAILROAD JOURNAL.

The following letter from MAJOR POUSSIN, a distinguished engineer of France, and formerly, if we recollect correctly, a member of the U. S. Engineer Corps, under GEN. BERNARD, will be read with peculiar interest by our numerous subscribers, as it has been by ourselves, as the *introduction* to what we anticipate will prove to the Railroad Journal a valuable correspondence.

We are the more gratified in giving this, and promising more from the same source, as we hope thereby to become better acquainted, not only with the present condition and future prospects of the railway system in France, but also in Belgium, Holland, Prussia and Russia, and, indeed, in Europe generally. We are aware that the writer has as much upon his hands as ought to be asked of any man, yet when so much good may result to the cause in both countries, from a free interchange of reports, experiments, and results in each, through the columns of the Railroad Journal, we shall feel justified in, and cannot well refrain from adding to the labors of the gallant Major, to the extent, we hope and trust, of *at least one letter each month*, and as many more as he can favor us with.

In thus acknowledging our obligation to Major Poussin for his very acceptable letter, we desire also to acknowledge our indebtedness to Mr. S. W. Saltonstall, to whose kindness we are indebted for the favor.

[Foreign Correspondence of the Railroad Journal.]

PARIS, May 8th, 1845.
No. 25 Boulevard Bonne Nouville.

D. K. MINOR, New-York:

Sir—I have received your letter of the 29th March last, accompanied by numbers of the American Railroad Journal, for which I return you my most sincere thanks.

I shall endeavor, at my first leisure moment, to prepare for you a communication on our French railroads, and on the progress in general of the cause of railway concerns throughout Europe; and thus far, as much as it lies in my power, satisfy my friend Mr. Saltonstall's promise to you in my behalf.

I am for the present very much engaged with several lines of railroad in France, which take all my time, and oblige me to make frequent and long absences from the capital. Thus I am leaving town in a few days, for an absence of three weeks, but will try in the mean time to collect some matters that may prove interesting to you.

The railroad system, by private enterprize, has gained considerably in France of late, and there is all probability that this remarkable fever of the public for railway investment will not abate for some time to come.

This remarkable change in the French opinion is due in a great measure to the influence of the results obtained in England and in America. In these days, millions of francs are readily subscribed for these schemes, whereas, a few years ago, they were unwilling to enter into the support of them. There are not less than four or five companies already organized, each with a capital of from 165 to 200 millions of francs, to bid for the charter, or privilege, of making and working lines from Paris to Belgium; to Lyons and Marseilles; to Bordeaux and Cette; to Tours and Nantes; to Chartres, Laval and Brest; to Rouen, Le Havre and Dieppe, and many other lines of minor importance.

The Chambers, at their present session, will decide on the main lines; and most likely the secondary lines will be conceded at the next session, in 1846.

Meantime, great efforts are making among practical engineers to improve the mode of locomotion, by the introduction of various new systems; namely, the atmospheric, with French modifications for the valves; the compressibility of air, with stationary engines, two systems; in dilatation of hot air, with comparatively small expense of fuel, etc. Some attempts are also making for renewing the experimentation of locomotion by steam on common roads; and important improvements are offered for the *solidrity* and security of trains on passing on small curves at high speed.

I call the particular attention of your readers to the scheme of running a line of railway from Paris to Brest, as interesting, directly, our American friends in various

points of view, but most particularly as offering a means of uniting more closely the interests of the two people, by the successful operation of steam navigation across the Atlantic, from a port of the United States to this great sea port of France—the only one facing to the western world which is completely out of all British influence in the eventuality of a war with that nation.

Renewing you my most sincere thanks for the interesting numbers of your valuable Journal, I remain, sir, very respectfully,

Your obedient servant,

GUILLAUME TELL POUSSIN,
Major du Genie.

The Editor of the Portland Advertiser, under the head of "Facts for the Railroad", says:

We quote with interest further statements respecting the position and progress of the various railroads and canals in the Western States, or rather in those regions which constitute the basin of the St. Lawrence. This Basin is one of those vast receptacles of waters and streams, which distinguish the American continent almost beyond any similar geographical features on other parts of the globe. The fact that the *natural* outlet of this basin is by the far northern course of the St. Lawrence, sweeping away almost to the frozen regions of the arctic zone, shows plainly enough, that the products of the temperate and fertile region around its upper waters could never find a profitable nor convenient transit by that channel. The arrangements of creative Providence have fixed that natural course of the mighty river, unchangeable while the earth endures; but the same Providence has given to *man* the inventive genius and the creative power to open other channels and avenues for the supply of his wants, by which a secondary Providence, if we may so phrase it exalts art above nature itself. There is scarcely any subject of an industrial nature, which has more occupied the whole mind of the Northern States and of the chief British possessions for the last twenty years, than the efforts and contrivances to open artificial access to the basin of the St. Lawrence. The invention of railroads is all that was wanting to perfect those efforts and now it has become impossible to prevent the creation of an artificial outlet from that valley to the sea. The enterprize of making Portland the seaport of the St. Lawrence, has not been put off too long. The time had not come until now. Invention had not gone far enough before. Men had not before obtained the wisdom, which experience only can give, nor the creative energy, which the success of bold experiments inspires. The struggle, now going on throughout New England and New York—a struggle worthy of the time, and worthy of the noble prize, is to find and *to have* the best point and line, and to bring out and to pour out—not the waters of the St Lawrence—but its vast and countless products, to the highway of the nations.

In the calculations and hopes of this effort, the position of Portland cannot be mistaken nor shaken, and the day is near at hand, when our own city will be a point of important interest to the settlers and traffickers upon the farthest waters of the Western Lakes. This is not—it cannot be—a fiction nor a speculation, nor a dream. The same power that has scooped the beds of the lakes, and marked out the channel of the St. Lawrence, has planted the rocky barrier which embosoms Portland harbor, and there they are, all in their great relation, which he who is wise may understand. Latitude and longitude cannot be falsified. Geographical distances are facts. "To the line and the plummet," is enough for us to say, and and none can gainsay it.

All the various efforts, therefore, which are making to perfect the communications in the regions of the lakes are of importance to us. In reference to the great work of the Illinois canal, connecting lake Michigan with the Illinois river, and thence with the Mississippi, we find the statement that effective operations will be immediately commenced under the new arrangement with the English bond holders, and a speedy completion of the work is expected. The Express says:—

"The trustees appointed by the bondholders of Illinois stock, to superintend the disbursement of the money contracted to be advanced by them for the completion of the Illinois and Michigan canal, will leave New York for Illinois on Monday next, the 9th inst. They will reach Chicago, the northern terminus of the work, in eight days thereafter. The trustees will remain on the ground till lettings are made, and the contractors commence operation. The work will be prosecuted with great energy and dispatch. Sixty miles of the line, from Juliet to the southern terminus at Peru, on the Illinois river, will be completed and in operation within six months; and it is expected that the whole line, from the Illinois river to lake Michigan, will be navigable within one year from November next."

When this work is completed, the central portions of Illinois will have a double outlet—to New Orleans or to New York and New England. Which way will their products go? Not all to the South, by any means.

We have before noticed the project for a railroad on the Canada side of lake Erie, from its eastern end near Niagara to a point near Detroit. Although we have expressed the opinion that this work is not of a primary class, either as regards its necessity or its value, traversing, as it would, a line parallel and near to lake Erie itself, yet it is proper to show what is thought of it by the responsible inhabitants of that region themselves. We have seen the proceedings of a public meeting at Hamilton, which indicate a good deal of interest, not only in Canada, but in Michigan, and a letter appears in the New York papers, conveying the following statements:—

"Among the many facilities and routes afforded at the present day in travelling from the eastern cities to the west, a new route is now in progress; I allude to the Great Western Railroad from the Niagara river to this place. You are probably aware that at the late session of the Canadian Parliament a charter was granted for the construction of a railroad "from the Niagara river to the Detroit river." A public meeting was held at Hamilton, Canada West, on the 15th inst., and the stock was at once eagerly taken up. No public work ever yet undertaken, either in this state, or leading to it, promises to be so advantageous as this railroad through Canada. In the winter the entire western travel to and from the east, will make this city the great thoroughfare.

"Another advantage which will accrue upon the completion of this road, will be the great increase of travel; thousands of families are every year deterred from coming West, by the dangers of our lakes; this route will be a short cut over land, and all dangers of shipwreck, &c. avoided."

The same writer has the annexed statements respecting another important work farther up the lakes:

"It is a matter of deep regret that the Government of the United States has not long ere this made the ship canal around the falls of Sault de Ste. Marie—the rapids in the river constitute the only impediment to the connection of the vessel navigation of lake Superior with that of lakes Huron, Michigan and Erie. In 1837, a survey was made by the Hon. John Almy, an engineer in the employ of the state of Michigan, and the estimated cost was $112,544. Another was made in 1843 by Col. J. J. Albert, of the United States Topographical Department, amounting to $454,107.

"The difference between the two estimates arose principally from difference of dimensions in the two plans, and from those considerations which belong to a canal adapted to steam navigation, and to the active trade which the canal would have to accommodate.

"The total length of the canal from water to water is about 4400 feet. The difference of level between lake Superior and lake Huron is about twenty-one feet—which can easily be overcome by three lifts. The deep interest which is now awakened by the success of the copper mines on lake Superior, and the increase of shipping in this great inland sea, will, it is hoped, induce the next Congress to make an appropriation for a ship canal deep enough to admit our largest lake craft, &c."

☞ Cattle now *ride* to market and thus save quite a per centage of fat, which, under the old process of driving, was *walked* off.

RAILWAY BUSINESS.—No one who does not pass frequently over the Worcester or Western railroad, or visit the immense merchandize depot at South Cove, can have any conception of the amount of freight, of almost every description, which daily passes

over the great western line of railway. Figures give an inadquate impression of this traffic; and nothing short of actual observation can convey any idea of the vast capacity of a railway, both for speedy and extensive transportation. Nothwithstanding the quantity of freight and the amount of passengers which at present constitute the traffic of the Worcester and Western railway, the Business in both respects might easily be doubled or quadrupled, with but, comparatively, a trifling increase of motive power. Even the great business already done upon this line of communication with the western interior, has hardly begun to develope the capacity or expansive power of a railway.

We do not know the average quantity of freight which is daily carried over the Worcester railroad; but we have every day occasion to be astounded at the moving masses of matter, inanimate and animate, which are constantly changing locality, in utter defiance of time and space. The long trains of marchandize cars—often numbering fifty—which are almost constantly passing and repassing upon this road, are unceasing objects of amazement. The downward trains teem with the products of the great west, which in increasing quantities are finding their way to our market; the *living* merchandize—horned cattle, sheep, and hogs, which in the march of improvement now *ride* to the slaughter—forming a very considerable item of transportation. The upward trains are loaded with the fruits of our manufactories, among which we daily notice large quantities of eastern lumber, coal &c.; and lately the western trains are returning their compliment of animate matter. The merchandize cars may now frequently be seen stocked with foreign emigrants, Boston having become the best landing place for them, in consequence of the ease, cheapness and rapidity with which they can hence be conveyed westward, towards the great goal of emigration.—*Boston Traveller.*

RAILROAD CONVENTION.

We find in the Windsor, Vt., Journal of last week, the following account of the proceedings of the convention held at that place on the 11th inst. There can be no mistaking the spirit of the people of the Connecticut river valley on this subject. But they have now talked, and assembled, and resolved enough, and they must now, every man of them, put their hands into their *own*, not their neighbor's pocket; select a competent and faithful engineer, who will locate the road where it *should* be, rather than where it will serve this or that particular interest, at the expense for all time of the public interest and convenience. Look first for the *best* location—then to individual interest afterwards.

"In pursuance of notice previously given, a convention of delegates from the several towns interested in the construction of a railroad along the valley of the Connecticut river, was held at the court-house, in this village, June 11th, 1845.

The business committee made the following report and recommended the passage of the accompanying resolutions, which, after being discussed by Messrs. Hopkins, Elliot, and Price, were unanimously adopted:

Your committee, as preliminary to a recommendation of business for the specific action of this convention, would respectfully submit the following facts and inferences for its consideration:

The legislature of Vermont, at its session in the autumn of 1836, with a view to facilitate communication in the valley of the Connecticut, various schemes having this for their object having previously failed, incorporated a company under the title of the Connecticut and Passumpsic rivers railroad company, with a more than usual liberal grant of power, to construct a railroad from the south to the north line of the state of Vermont, up the valley of the Connecticut and Passumpsic rivers.

At the same session, a grant of $3,000 was made for a survey of the route, and commissioners were appointed to superintend the same. During the following year, a survey was commenced and completed by Prof. Twining, of New Haven, and the route found to be favorable for a road, both in regard to grade and cost of construction. In the mean time, active and vigorous measures were taken by the citizens of the valley to procure the accomplishment of this enterprize.

Immediately followed the commercial derangement of 1837, and under the pressure of the distress and embarrassment of that eventful period this enterprize, with most others of a similar character, was for the time suspended.

In the mean time, and before the revival of trade, a line of road from Boston, already completed to Nashua, N. H, was extended to Concord, in that state, and another line of road from Boston to Fitchburg, Mass., was determined upon, both reaching towards the valley of the Connecticut, and seeking an extension thence to lake Champlain and the vast regions of country north and west of that lake, and each endeavoring to anticipate the other in extension, hoping thus to secure to itself the travel and freight, not only of western New Hampshire, Vermont, and northern New York, but also that of the Canadas and the far north-west, and each relying for the means of extension upon the capital of Boston, which city, long distinguished for unity of purpose and far-sighted enterprize on the part of its citizens, under the impulse of a business vastly increased by the opening of the Western road and the establishment of the Cunard line of steamers, was pushing forward enterprises of this description with a boldness, a method, and a munificence alike wonderful and praiseworthy.

In view of this state of things, it was not wonderful that the citizens of the valley of the Connecticut, laboring under the great disadvantages to which they had been subjected by the opening of the Western road, should naturally look to the extension of one or both of these roads, as likely to afford, most speedily, an opening to market, and that, too, in point of distance, sectional ties, and consequent sympathy to the market of their choice.

It became at once a matter of great importance to determine what extension should be made. Four great routes—two from Concord and two from Fitchburg—were warmly advocated by their friends respectively. One of these routes was from Concord, via Haverhill and Stanstead, to Montreal. Another from the same terminus, via Lebanon and Montpelier, to lake Champlain. Another from Fitchburg, via Keene and Rutland, to the lake; and the fourth, was from Fitchburg, via Brattleboro' and Rutland, to the lake. The legislatures of Massachusetts, New Hampshire, and Vermont granted charters under which either or all of such extensions might be made; and until very recently, public attention in the states of Vermont and New Hampshire has been wholly absorbed in the various schemes for the extension of these two lines of road.

During last year, an extension of the Fitchburg road was secured, on the more southern route, as far as Brattleboro', and within the last two months the capital stock has been taken in another extension of the same road, via Keene, to Bellows Falls, with a confident expectation on the part of the public that the same line, if extended at all, would be extended to the lake, via Rutland. In the mean time, the river line of road was progressing north, from New Haven, by reaches. It had been extended to Springfield. From thence to Northampton it was in progress of construction, and from Northampton to Greenfield, a company had been incorporated and the stock nearly all subscribed, which last extension, in connection with the extension of the Fitchburg road to Brattleboro', will furnish a continuous line of road from New Haven to Brattleboro', wanting, at most, some 6 or 7 miles. Thus, then, about two months since, a line of road from New Haven to Brattleboro', and also a line of road from Boston to Bellows Falls, had become matters of certainty, with a probable extension of the latter to Burlington, via Rutland.

Such was the aspect of railroad movements in the valley of the Connecticut, at the origin of the movement of which this convention is the result. It was believed, with a line of road from the valley below to Boston, reaching towards western Vermont, in connection with the line from New York, it only needed a road from Brattleboro', up the vallies of the Connecticut and Passumpsic to perfect the system, accommodate the entire state of Vermont, as well as western New Hampshire, and give to both an opening east and south, and of consequence to the principal markets in the United States.

It was in view of such a state of things, and to secure, if possible, such results, that

an appeal was made to the various interests in the valley of the Connecticut, to reunite their energies and to co-operate in a general movement to effect this great enterprise, with what success the call for this convention bears testimony. Hitherto, there have been strong indications along almost the entire valley to press forward to the accomplishment of this object.

But your committee would further report, that within the last few days our prospects have assumed a new aspect. Arrangements have been entered into, which, if carried into effect, will materially affect the enterprise which this convention has met to promote.

The legislature of Vermont, at its session in 1843, incorporated a company under the title of the "Vermont Central Railroad Company," to construct a road from lake Champlain up Onion river to Connecticut river, to connect with either the Concord or Fitchburg line, extended, and with a grant of power and privilege, in the opinion of your committee, unprecedented in the legislation of New England. In public estimation, until recently, this charter was to be used in the extension of the Concord line. The efforts of the friends of the Vermont central route have, until a very late date, favored that extension. By a circular, addressed to the public, signed by committees of the Fitchburg and Vermont Central companies, and respectively, by several gentlemen connected with the Pittsburg and Cheshire companies, and other prominent railroad men, it appears, that by a bold and wise stroke of policy on both sides, an arrangement has been entered into, in terms to effect a connection direct between the Cheshire and Vermont Central companies, having for its object the extension of the Fitchburg line, via Montpelier, instead of Rutland. If this arrangement is carried into effect, it will give a road along the banks of the Connecticut for a distance of fifty miles, viz., between Westmoreland, N. H., and Hartford, Vt., occupying so far the route of the river road, and during a very considerable part of the distance, the very ground upon which the river road would of necessity be constructed, and if both projects should be pushed forward, resulting in a conflict of interests.

The committee would, therefore, respectfully recommend to the convention the assumption of no idle ground of opposition to the proposed arrangement; but that it take such action as to place the friends of a river road in such position as hereafter, at any time, most readily to avail themselves of circumstances favorable to their favorite project.

The committee would, therefore, beg leave to report the following resolutions:

Resolved, That the commissioners under the Connecticut and Passumpsic railroad charter be requested to take all measures necessary to the opening of books for subscriptions to its capital stock, according to the notice given.

Resolved, That a committee of six persons be appointed, with power to add indefinitely to their number, and with full authority, in connection with said commissioners, if a connection shall not be formed between the Cheshire and Vermont Central companies, as proposed, to take such measures as they may deem best, to secure the accomplishment of the Connecticut and Passumpsic enterprize.

VERMONT CENTRAL RAILROAD.

The engineer of the Fitchburg railroad (says the Bunker Hill Aurora,) having reported to the board of directors in favor of the Vermont Central Railroad, from Connecticut river to lake Champlain, after the discussion of the subject for one week, and a full hearing of the question, the board voted on Wednesday last, unanimously, to accept said report, and accordingly recommend the construction of that road to the public. The reasons given for this decision will be found in the following

CIRCULAR.

Great Central Route from Boston, via Fitchburg, Keene and Montpieler, to Lake Champlain, Northern New. York and Montreal.

The proposed railroad routes, designed to connect the city of Boston with Vermont, lake Champlain and Canada, having been examined, with a view to concentrate public opinion on one route and insure its completion with all possible despatch, the undersigned have come to the conclusion that the Fitchburg, Vermont and Massachusetts, and Cheshire railroads, with the Vermont Central railroad, extending from the Cheshire railroad, on Connecticut river, via Montpelier, to Burlington, is the best and most feasible route, and we recommend it to the public for the following reasons, viz:

1st. Because the Fitchburg railroad is finished and in successful operation; the Stock of the Vermont and Massachusetts and Cheshire railroads, (continuous lines) actually subscribed, so far as to insure their completion, and an entrance into Vermont, and under the SINGLE CHARTER of the Vermont Central railroad, the line may be extended from such entrance to Lake Champlain.

2d. Because the Central railroad is the most practicle route through Vermont, having through its whole extent no gradient exceeding fifty feet to the mile, while the soil is of such a character that it may be constructed with more facility, than any other line, and at a very moderate expense.

3d. Because the Green Mountain summit on this line is depressed more than four hundred feet below the summit of the other lines surveyed.

4th. Because the line traverses one of the most fertile and productive sections of the valley of the Connecticut, abounding in wealth, manufactures, and unoccupied water power.

5th. Because it opens in addition a large and populous district of country, abounding in minerals, agriculture and industrial resources.

6th. Because the local business of the route is sufficient to insure the success of the undertaking.

7th. Because its route, easy gradients, moderate cost, and large local traffic, aiding its through business, must insure its extension to Montreal, and secure to it the immense through business between northern N. Y., Canada and Boston, which bids fair to exceed the traffic of the Western railroad.

8th. Because the route will open communication to Boston without forming a common line towards a rival market.

9th. Because its charter is equally favorable to those embarking their wealth in the proposed enterprize, authorizing, as it does, dividends of over ten per centum per annum, exempting the stock and property of the company forever from taxation, besides presenting other important advantages.

Because, for the foregoing reasons, it is certain the capital necessary for its construction may be easily obtained, as it must prove one of the most productive railroads in the country.

Safety of French Railroads.—An exact return from the office of the Minister of Public Works, relating to accidents on railroads, exhibits these results of the first six months of 1844. On the six railroads terminating in Paris, and of which the total length is 340 kilometres—about 220 miles—there passed, from 1st January to 30th June, 18,426 trains, conveying 1,889,718 persons; the distances travelled were 510,523 kilometres, or about 127,254 leagues; and during that time and on these long routes, not a single traveller sustained any injury. Only three persons were hurt, and they were all agents of the company.

This certainly presents a remarkable illustration of the security to human life of this mode of locomotion. It is rendered still more remarkable by the comparative statement subjoined, of the disasters in Paris during a period of seven years caused by carriages:

Year.	Wounded.	Killed.
1834	134	4
1835	214	12
1836	220	5
1837	361	11
1838	366	19
1839	334	0
1840	394	14

Important Discovery in Manufacturing Iron.—The New Haven Palladium states that Mr. W. C. Green, of New Jersey, at the Boston iron works, has made an improvement in the process of puddling the iron from the pig to the bar. Instead of using the pig iron, which costs about $35 the ton, he is enabled to use a large portion of the ore which costs but $2 50 per ton, by which he effects, in labor and material, a saving of more than 33 per cent., and he gives a far better quality of iron than that which is obtained from the pig; as much better in appearance as China is better than earthenware. Mr. Green's secret consists chiefly in mixing a composition with his ore, and while in a molten state, by which the carbon is more rapidly exhausted than it is under the old process, and the iron is thus, in half the time, left tougher and finer.

AN IMPROVED TURN-TABLE is said to have been introduced into use on several of the English railways; and as every improvement of the kind is of equal importance here as there, we give the following description of it from the "Transactions of the Society of Arts":

DESCRIPTION OF ELLIS'S TURN-TABLE.
BY B. ROTCH, ESQ. V. P.

This ingenious invention obviates one of the greatest objections to the turn-table, which is, its being supported on numerous small friction-rollers under its outer edge, as well as on a central pillar. The object of these rollers is to facilitate the turning of the table when the heavy weight of an engine or carriage is upon it; but this weight is so excessive, that coming, when passing over the table unequally, first on one edge as it enters upon it, and then on the other, as it passes from it, the table gets pressed down, first on one side, and then on the other, with such rapidity and violence of strain as to cause a great noise of successive jarring blows, and a constant derangement and damaging of the rollers.

Ellis's turn-table prevents all this, by doing away with these rollers, and allowing the outer edge of the table to rest firmly, and without rollers, on a solid support, or circular bed, made to receive it. It is also supported on a central pillar, on which the centre of the table bears firmly and steadily at the same time. When the table is left in this condition, which may be called its position of rest, the bearings are so firm that the engines and carriages roll steadily over it without noise or jar, just as if it were a part of the railway itself; but the central pillar is so arranged as to be easily acted upon by a compound lever, on the principle of the lever of a weighing machine, and the table may, in fact, be made into a weighing machine by adapting a steelyard and weights to this compound lever; and, when it is required to turn a carriage or engine on the table, it is rolled on to it while remaining firmly and steadily in its rest position, and, when the weight is placed on its centre, and has an equal bearing over the table, the table is lifted from its circular bearing all round the outer edge by the compound lever, and thrown entirely on the centre pillar, with the greatest ease the distance required, and the table then let firmly down again on its solid circumferential and central bearing, or to what is called its rest position.

This plan is very simple, very effective, and saves an immense amount of wear and tear in the items of turn-tables. It has already been extensively adopted.

The project of building a railroad up the valley of the Connecticut to Windsor, Vermont, is attracting a good deal of attention. The Caledonian, published at St. Johnsbury, in reference to the object of the meeting to be held at Windsor on the 10th June, says:—"We have known for some short time that this project was on foot—that men of large capital, enterprize and intelligence were engaging in it, and determined to push it onward. The stock of a road is already taken up to Greenfield, Mass., we believe—and there is sufficient wealth in the valley to build a road to Wells River, &c., with the aid men below Greenfield interested in securing the trade of the valley, can furnish."

The Boston Courier in alluding to the plans for railroads up the valley of the Connecticut, remarks:—

"Who will not fail to perceive that the projects alluded to will add nothing to the business of this city, *unless* the Connecticut river railroads should be *tapped* in more places than one by Boston enterprize and capital."—*Connecticut Courant.*

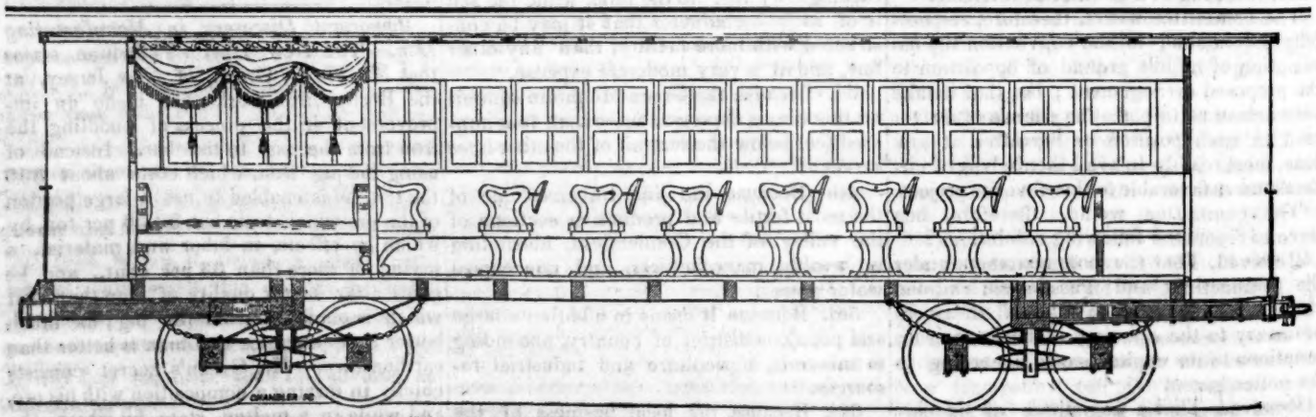
Cayuga Lake.—Captain Wilcox has this week put upon the lake the large and elegant steam-packet Simeon De Witt and Ithaca, continually in service, and leaving Ithaca and the Cayuga Bridge twice each day in the week, except Sunday.

This route is of importance to the entire southern tier of counties, and were it only for the intrinsic beauty of the lake, and its combination of cultured farms and beautiful villages, it would be worthy the attention of the traveller.—*Alb. Jour.*

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*
Albany Iron and Nail Works, Troy, N. Y.
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co., Boston.

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.
When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside. THOMAS & EDMUND GEORGE,
ja45 N. E. cor. 12th and Market sts., Philad., Pa.

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.
Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.
All orders directed to the Agent, Troy, N. York, will be punctually attended to.
HENRY BURDEN, *Agent.*
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.
*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufcturing so as to keep pace with the daily increasing demand. ja45



DAVENPORT & BRIDGES CONTINUE TO MANUFACTURE TO ORDER, AT THEIR WORKS, IN CAMBRIDGEPORT, MASS.
Passenger and Freight Cars of every description, and of the most improved pattern. They lso furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All order punctually execued and forwarded to any part of the country.
Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.

NEW JERSEY RAILROAD AND TRANSPORTATION COMPANY.

Length of Road, 33 96-100 miles. Capital, $2,000,000.
JOHN S. DARCY, Esq., President. ROBERT SCHUYLER, Esq., Vice President.
J. P. JACKSON, Esq., Secretary. J. WORTHINGTON, Esq., Treasurer.

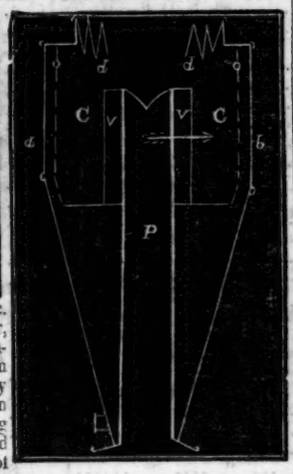
Leave New York, foot of Courtland street.	DAILY. A. M.	DAILY. P. M.	SUNDAY. A. M.	SUNDAY. P. M.
For Newark	9, 11, 12	2, 3, 4 3-4, 6, 7 1-2	9	4 3-4
" Elizabethtown	9, 11	2, 3, 4 3-4, 6		
" Rahway	9, 11	3, 4 3-4, 6		
" New Brunswick	9	3, 4 3-4		
Leave New Brunswick	6, 7 1-2, 11 1-2	8 3-4	11 1-2	8 1-2
Rahway	6 3-4, 7, 8 1-4, 12	4 3-4, 9 1-4		
Elizabethtown	7, 7 1-2, 8 1-2, 10 1-2, 12	3 1-2, 5		
Newark	7 1-2, 8 1-4, 9, 11	1 1-2, 4, 5 1-2, 7, 9 3-4	11 3-4	9 3-4
For New York.				

9 A. M. and 3 P. M. to meet the Morris and Essex trains, and 9 A. M. and 4 3-4 P. M. to meet the Somerville train, and for Philadelphia.

TABLE OF DISTANCES AND FARES.

	New York. Miles.	New York. Cents.	Newark. Miles.	Newark. Cents.	Elizabethtown. Miles.	Elizabethtown. Cents.	Rahway. Miles.	Rahway. Cents.	N. Brunswick Miles.	N. Brunswick Cents.
New York			9 1-4	25	14 1-2	31 1-4	19 3-4	31 1-4	31 1-2	50
Newark	9 1-4	25			5 1-2	12 1-2	10 1-2	25	22 1-2	50
Elizabethtown	14 1-2	31 1-4	5 1-2	12 1-2			5	12 1-2	16 3-4	50
Rahway	19 3-4	31 1-4	10 1-2	25	5	12 1-2			11 3-4	37 1-2
New Brunswick	31 1-2	50	22 1-2	50	16 3-4	50	11 3-4	37 1-2		

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.



TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

E. A. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, or to Messrs. Baldwin & Whitney, of this city, will be promptly executed.

FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

SAMUEL NOTT, CIVIL ENGINEER, SURveyor and General Agent, Bangor, Me. Railroads, Common Roads, Canal, Factory and Mill Sites Towns, Farms, Wild Land, etc., surveyed. Plans and Estimates for Buildings, Bridges, etc., prepared, and all appertaining business executed.

— REFERENCES. —

Boston, { Col. James F. Baldwin, Civil Engineer. Col. J. M. Fessenden, " "

Wm. Parker, Esq., Engineer and Superintendent Boston and Worcester railroad. ja45

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,
j5a3 Albany Iron and Nail Works, Troy, N. Y.

FOR SALE, AT A SACRIFICE—A LOCOmotive Engine, 4 wheels and Tender. Cylinders 10 in. dia., Stroke 16 in., Cylinders inside of smoke box. Weight of engine, with wood and water, about 9 tons. This engine and tender are new, and of the best materials and workmanship. If required, would be altered to a 6 wheeled engine.

Also, 1 20-horse High Pressure Steam Engine.
2 8-horse " " "
1 Upright Hydraulic Press.

All of which will be sold low, on application to

T. W. & R. C. SMITH.
Founders and Machinists,
May 12tf Alexandria, D. C.

RAILROAD IRON AND FIXTURES. THE Subscribers are ready to execute orders for the above, or to contract therefor, at a fixed price, delivered in the United States.

DAVIS, BROOKS & CO.,
ja45 21 Broad st., N. York.

MACHINE WORKS OF ROGERS, KETCHum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works beingextensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
a45 Paterson, N. J., or 60 Wall street, N. York.

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee.

G. A. NICOLLS,
ja45 *Reading, Pa.*

GEORGE VAIL & CO., SPEEDWELL IRON Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1¼ in. to 2¼ in thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wro't. Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wro't. Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions.

ja45ly

TRAINS LEAVE	FOR	BY RAILROAD	DAYS.	A M.	P. M.	MILES.	FARE.
Boston	Portland	Eastern,	Daily,	7½,	2½,	106	$3 00
"	Portsmouth	"	"	7½,	2½, 4½,	54	2 00
"	Newburyport	"	"	7½,	2½, 4½,	35	1 25
"	Salem	"	"	7½, 9, 11½,	2½, 3½, 4½, 6,	14	50
"	Portland	Boston and Maine,	"	7½,	2½,	109	3 00
Portland	Boston	" "	"	7½,	3,	109	3 00
Boston	Lowell	Boston and Lowell,	"	7, 11,	2, 5,	26	75
Lowell	Boston	" "	"	7½, 11,	2, 4½, 5½,	26	75
Boston	Concord	Concord,	"		3½,	76	2 00
Concord	Boston	"	"		3½,	76	2 00
Boston	Nashua	Nashua and Lowell,	"	7, 11,	5,	41	
Nashua	Boston	" "	"	6½,	1½, 5,	41	
Boston	Worcester	Boston and Worcester,	"	7, 9,	2½,	44	1 25
Worcester	Boston	" "	"	7, 10,	6,	44	1 25
"	"	" "	Sundays,	7,			
Boston	Worcester	" "	"		2,		
Boston	New York via Norwich	" "	Mon., Wed. & Fri.,		4,		
"	" " L. Island railroad	" "	Tues., Thur. & Sat.,	7,			
"	" " New Haven	" "	Daily,	9,	2½,		
"	Albany	Western,	"	9,	2½,	200	6 00
Albany	Boston	"	"	8½,	1½,	200	6 00
Springfield	Boston and Albany	"	"	7,	3,		
Boston	New York via New Haven	"	"		2½,		
Charlestown	West Acton	Fitchburg,	"	8,	1, 4½,		
West Acton	Charlestown	"	"	7½, 10½,	5,		
Boston	New York, via Steamboat trains	Boston and Stonington,	Tues., Thur. & Sat.,		4½,		
"	" " " "	Boston and Newport,	Mon., Wed. & Fri.,		4½,		
"	Providence	" "	Daily,	7½,	4,	41	1 50
Providence	Boston	" "	"	On arrival of the	mail	41	1 50
Taunton	"	" "	"	8,	4,		
New Bedford	Boston	" "	"	7½,	2½,		
Boston	Dedham	" "	"	8½,	3, 6½,		
Dedham	Boston	" "	"	7, 10,	5½,		
New York	Greenport	Long Island,	"	7½,		95	2 25
Brooklyn	Hicksville & intermediate places	"	"	9½,		26	56½
"	Greenport " "	"	Tues., Thur. & Sat.,	9½,		95	2 25
"	Hicksville, (Saturd'y to Suffolk)	"	Daily,		4,	26	56½
Greenport	Brooklyn, (Boston train)	"	"		1,	95	2 25
"	" (accommodation do.)	"	Mon., Wed. & Fri.,			95	2 25
Hicksville	" & intermediate places	"	Daily,	7,	1½,	26	56½
New York	Albany & Boston via N. Haven	Steamer,	"	6½,			5 00
"	Middletown	New York and Erie,	"	8, 3,		53	
Middletown	New York	" "	"	6½,	3½,	53	
Philadelphia	Pottsville	Reading,	"	9,		94	3 50
Pottsville	Philadelphia	"	"	9,		94	3 50
New York	Newark	N. J. railroad and trans. co.,	"	9, 11, 12,	2, 3, 4½, 6, 7½,	9½	25
Newark	New York	[9 A. M. *and* 3 P. M., *connect with Morris Railroad.*]	"	7½, 8½, 9, 11,	1½, 4, 5½, 7, 9½,	9½	25
"	"		Sundays,	9,	4½,	9½	25
New York	Newark	[9 A. M. *and* 4½ P. M., *trains, connect with Somerville Railroad.*]	"	11½,	9½,	9½	25
"	Elizabethtown		Daily,	9, 11,	2, 3½, 4½, 6,	14½	31½
Elizabethtown	New York		"	7, 7½, 8½, 10½, 12,	3½, 5,	14½	31½
New York	Rahway	N. J. railroad and trans. co.,	"	9, 11,	3, 4½, 6,	19½	31½
Rahway	New York	" "	"	6½, 7, 8½, 12,	4½, 9½,	19½	31½
New York	New Brunswick	" "	"	9,	3, 4½,	31½	50
New Brunswick	New York	" "	"	6, 7½, 11½,	8½,	31½	50
"	"	" "	Sundays,	11½,	8½,	31½	50
New York	New Brunswick	" "	"	9,	4½,	31½	50
Philadelphia	New York	Camden and Amboy,	Daily,	7,		91	3 00
New York	Philadelphia	" "	"	5½,		91	3 00
Philadelphia	Bristol	Philadelphia and Trenton,	"	9,		30	75
Bristol	Philadelphia	" "	"		4,	30	75
Philadelphia	Baltimore	Philad. Wil. and Baltimore,	"	8,	4,	93	
Baltimore	Philadelphia	" "	"	9,	8,	93	
"	Washington	Baltimore and Washington,	"	9,	5, 11½,	41	2 50
Washington	Baltimore	" "	"	6,	5½,	41	2 50
Baltimore	Cumberland and inter. places	Baltimore and Ohio,	"	7½,			
"	Frederick " "	" "	"		4,		
Cumberland	Baltimore	" "	"	8,			
Hancock	"	" "	"	10½,			
Martinsburg	"	" "	"	11½,			
Harper's Ferry	"	" "	"		12½,		
Frederick	"	" "	"		2,		
"	"	" "	Sundays,	8,			
Ellicott's Mills	"	" "	Daily,	7½, 12,	4½,		
Richmond	Petersburg	Richmond and Petersburg,	"	10½,	1½,		
Petersburg	Richmond	" "	"	5½,			
Albany	Schenectady	Mohawk and Hudson,	"	8,	5½,		
Schenectady	Albany	" "	"	9,	3½,		
Albany	Saratoga	" "	"	7½,	2,		
Saratoga	Albany	" "	"	7,	12½, 5,		
Troy	Saratoga	Troy and Saratoga,	"		3½,		
Saratoga	Troy	" "	"	7½,			
Auburn	Rochester	Auburn and Rochester,	"	8½,			
Rochester	Auburn	" "	"	8,	3,		
"	Buffalo	Rochester and Buffalo,	"		3,		
Buffalo	Rochester	" "	"				
"	Falls	Buffalo and Falls,	"	9,			
Falls	Buffalo	" "	"		1½,		
Buffalo	Albany	Albany and Buffalo	"	8½,			